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Self-efficacy Beliefs Of Florida School Principals Regarding Federal And State Accountability Measures

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SELF-EFFICACY BELIEFS OF FLORIDA SCHOOL PRINCIPALS
REGARDING FEDERAL AND STATE ACCOUNTABILITY MEASURES

by

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A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Education
in the Department of Educational Research, Technology and Leadership
in the College of Education
at the University of Central Florida
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Major Professor: William Bozeman

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ABSTRACT

This study examined how self-efficacy beliefs, a central construct of social cognitive theory, might be used to inform educational leadership and policy decisions related to school accountability measures. A survey of 112 principals in Florida was used to investigate the degree to which principals believed the goals of federal and state school accountability measures (the *No Child Left Behind Act of 2001* and the *Florida School Grades Plan*) were actually attainable, and to what degree they believed their leadership actually helped achieve these goals.

A large majority (83.8%) of respondents believed the state goals to be attainable, whereas only a minority (20.7%) believed the federal goals could be attained. This disparity was associated with a significant difference in self-efficacy beliefs related to the plans, and in the associated leadership behavior of principals.

This significant difference in principal self-efficacy beliefs could predict a disparity in leadership effort toward goal attainment. The study suggested that policymakers should be cautious about revising the goals of the *Florida School Grades Plan*, since principals' self-efficacy beliefs related to the plan were already quite high. In contrast, the findings suggested that policymakers should look to revising the goals of the *No Child Left Behind Act of 2001* to correct the dearth of principal belief in the actual attainability of its goals.

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TABLE OF CONTENTS

LIST OF FIGURES	xii
LIST OF TABLES	xiii
LIST OF ACRONYMS/ABBREVIATIONS	xiv
CHAPTER 1: INTRODUCTION	1
School Accountability Under the Federal Plan	1
Florida’s School Accountability Plan	4
Accountability and Public Charter Schools	6
The Purpose of the Study	7
The Theoretical Basis Of The Study	8
Research Questions	12
Definitions	13
Assumptions	15
Population and Sample	15
Statistical Procedures	15
Significance of the Study	17
Limitations	17
Organization of the Dissertation	18
Summary	19
CHAPTER 2: LITERATURE REVIEW	21
Introduction	21
The Construct of Self-Efficacy	22

Bandura’s Triadic Reciprocity	25
Teacher and Principal Self-Efficacy Beliefs	27
Principal Self-efficacy: The “Elusive” Construct	29
Principal Self-Efficacy Beliefs and Instructional Leadership.....	34
Principal Self-Efficacy Beliefs and Human Resources Management.....	36
Overall Patterns And Trends In The Literature	41
The Theoretical Basis Of The Study.....	45
Theoretical and Practical Dimensions of the Study	49
Summary	50
CHAPTER 3: METHODOLOGY	58
Introduction.....	58
Research Questions	58
Population and Sample	60
Research Design.....	62
Instrumentation	67
Data Collection Procedures.....	72
Analytic And Statistical Methods	73
Summary	75
CHAPTER 4: DATA ANALYSIS	78
Introduction.....	78
Population and Sample Characteristic	78
Analysis of Response Rates	81

Analysis of General Leadership Self-efficacy Beliefs.....	82
Analysis of Specific Leadership Self-efficacy Beliefs and Attainability of Goals.....	83
Correlation of Self-Efficacy Belief with Leadership Behaviors.....	85
Multiple Regression Analysis of Contribution of Personal Factors	87
Multiple Regression Analysis of Contribution of Environmental Factors	90
Summary	91
CHAPTER 5: CONCLUSIONS	94
Introduction.....	94
Review of Research Questions	95
Review of Research Methods	97
Limitations of the Current Study	99
Conclusions Regarding Principal Self-Efficacy Beliefs	101
Conclusions Regarding Personal Factor Effect	104
Conclusions Regarding Environmental Factor Effect	106
Relationship of the Current Study to Prior Research.....	108
Practice and Policy Implications of the Current Study	111
Recommendations for Future Research	114
Summary	116
APPENDIX A: PRINCIPAL SELF-EFFICACY SURVEY	119
APPENDIX B: PRINCIPAL SELF-EFFICACY SURVEY RESULTS	144
APPENDIX C: RESEARCH APPROVAL (BREVARD)	152
APPENDIX D: RESEARCH APPROVAL (LEE).....	154

APPENDIX E: RESEARCH APPROVAL (POLK)	157
APPENDIX F: HUMAN SUBJECTS RESEARCH APPROVAL (UCF IRB)	159
APPENDIX G: PERMISSION TO USE COPYRIGHTED MATERIAL (APA).....	161
LIST OF REFERENCES	163

LIST OF FIGURES

Figure 1: Triadic Reciprocity in Social Cognitive Theory	26
Figure 2: Relationship of Variables Within the Environmental Factor	66

LIST OF TABLES

Table 1: Leadership Standards Measured in Selected Self-Efficacy Instruments	44
Table 2: School District Profiles 2006-2007.	61
Table 3: Variables in Environmental Factor	69
Table 4: Variables in Personal Factor	70
Table 5: Variables in Behavioral Factor	71
Table 6: Comparison of Charter School Percentage	79
Table 7: Comparison of Title I School Percentage	79
Table 8: Comparison of School Levels	80
Table 9: Principals' Experience in Education	81
Table 10: Principals' Professional Preparation in Education	81
Table 11: Relationship of Belief in Goal Attainability With Self-Efficacy Belief	85
Table 12: Relationship of Self-Efficacy Belief to Action Toward Federal Goal	86
Table 13: Relationship of Self-Efficacy Belief to Action Toward State Goal	87
Table 14: Contributions of Personal Variables to Self-Efficacy Belief	89
Table 15: Contributions of Environmental Variables to Self-Efficacy Belief	91

LIST OF ACRONYMS/ABBREVIATIONS

AYP	Adequate yearly progress
ESEA	<i>Elementary and Secondary Education Act of 1965</i>
FCAT	Florida Comprehensive Assessment Test
LBDQ	Leader Behavior Description Questionnaire
NAEP	National Assessment of Educational Progress
NCLB	<i>No Child Left Behind Act of 2001</i>
PK-12	Pre-kindergarten through twelfth grade
PSES	Principal Sense of Efficacy Scale or Principal Self-Efficacy Scale
SES	Socio-economic status
SPSS	Statistical Package for the Social Sciences
TSES	Teacher Sense of Efficacy Scale

CHAPTER 1: INTRODUCTION

Public schooling in the United States experienced several dramatic changes in the decades leading up to the *No Child Left Behind Act of 2001*. Many of these changes, such as demographic changes, economic changes, and significant advances in communications and computing technology, were not limited to education. Two of the most fundamental changes in schooling were widespread in American public life: a move to privatization of public services and a strong demand for accountability for results from public agencies. The trend of privatization appeared in education as public charter schools, vouchers, and home schooling. The trend of accountability appeared in education most conspicuously as the student achievement goals established in the *No Child Left Behind Act of 2001*, which was described as the most sweeping reform of federal education law in nearly 40 years (U.S. Department of Education, n.d.)

The law was passed by large bipartisan margins in both houses of congress shortly after the September 11, 2001 terrorist attacks. At the time of law's signing in January 2002, U.S. Secretary of Education Rod Paige noted that while many schools had done well educating some children, the new law would "make sure we're providing all of our children with access to a high-quality education" (U.S. Department of Education, 2002, paragraph 6).

School Accountability Under the Federal Plan

Many new concepts, rules, and regulations were included in the law, but one of the most notable was the requirement that all states receiving federal funds for education

must establish accountability systems in which all students demonstrate proficiency in all state grade-level standards in reading, writing, and mathematics by 2014 (*No Child Left Behind Act*, 2002).

States had to define annual benchmarks toward this goal, and schools had to show adequate yearly progress toward that goal by meeting these annual benchmarks. Schools receiving Title I funding that failed to show adequate yearly progress were then subject to a four-year improvement process that either led to meeting the goal or to reconstituting the school (*The No Child Left Behind Act of 2001*, 20 U.S.C. § 6316, 2002).

The *No Child Left Behind Act of 2001* (NCLB) provided for an elaborate system of measurement, rewards, and sanctions for schools, school districts, and states as they worked to comply with the law's requirement of universal proficiency. This combination of measurements, rewards, and sanctions on states had a number of precedents in federal law in matters such as racial equality, poverty, and environmental protection, a top-down approach to governance described by Kincaid (1990, p. 5) as "coercive federalism."

One conceptual and operational problem with this system was the statistical reality that any measure of natural factors such as academic ability and student achievement would fall more or less on a normal distribution curve; and that it was, at best, "extraordinarily ambitious" (Linn, Baker, & Betebenner, 2002, p.12) or, more pointedly, "completely unrealistic" (Linn, 2005, p. 15) to actually have expected that all students in all states could and would have mastered all standards in reading, writing, and mathematics by a certain date. Although congressional staffers had determined that no state in the country would be able to meet the law's 100% proficiency goal, debate on the

matter was cut short by the September 11, 2001 terrorist attacks and the goal of 100% proficiency on the federally-required state assessments remained the key element of the law's accountability plan (McGuinn, 2006, p. 176).

Until NCLB, the only federally-required academic assessment had been the National Assessment of Educational Progress (NAEP), a series of subject area examinations administered to a scientific sample. Linn (2005) calculated that meeting the 2014 NCLB deadline for universal proficiency would have required the rate of learning gains to increase to a level "nothing short of miraculous," noting that even the NAEP proficiency levels for reading were set at the 70th percentile for 4th grade students instead of the 100% level required by NCLB.

In a constitutional analysis of NCLB, Welner (2005) identified this problem with unrealistic proficiency levels as one of two fundamentally non-rational presumptions of NCLB, the other being that of causation. Welner saw NCLB's penalties for schools failing to meet the 100% proficiency requirement as an inherent presumption of complete causality in that schools would be 100% responsible for what was learned by each and every student. He concluded that these two presumptions, unsupported by any precedent or research, demonstrated "a staggering level of political arrogance" (Welner, 2005, p. 174).

Bryant, et al. (2008) developed several mathematical models to project the most likely achievement levels of California elementary school students in 2014, and concluded that about half of that state's school would fail to make AYP in English language arts and that nearly all elementary schools would fail to make AYP in

mathematics. A RAND study (Hamilton et al., 2007, p. 150) found that only 44% of elementary and middle school principals in California believed it was possible for their schools to make AYP for the coming 5 years, much less achieve the 100% proficiency level they were required to be working toward. Despite these warnings about setting a proficiency level of 100%, all 50 states followed the law by formally adopting and implementing rigorous accountability plans to enforce it (U.S. Department of Education, 2003).

All public schools and all public charter schools were obligated under the law to be in active pursuit of universal proficiency. The law required that states raise the requirements for the percentage of students achieving grade level proficiency gradually and Florida's plan called for an annual increase in this requirement (Florida Department of Education, 2005b).

Despite their best efforts, only 36% of Florida schools were able to make adequate yearly progress in 2005 (Florida Department of Education, 2005a). In 2008, only 24% of public schools in Florida made adequate yearly progress under this federal accountability plan (Florida Department of Education, 2008a). By 2009, only 23% of public schools made adequate yearly progress (Florida Department of Education, 2009).

Florida's School Accountability Plan

This federal accountability system was implemented in Florida without eliminating the previous state accountability system, known as the *Florida A+ Accountability Plan*, the first version of which was implemented in 1999 and revised in

2006. The *Florida A+ Accountability Plan* (2006) included several new accountability provisions, including the *Florida School Grades Plan* in which schools received letter grades based largely on gain scores on the state achievement test, known as the Florida Comprehensive Assessment Test, or FCAT.

Since the state plan measured gains, but the federal plan measured actual achievement levels, it was common in Florida to find schools that received grades of A or B on the *Florida A+ Accountability Plan*, but failed to make adequate yearly progress under the *No Child Left Behind Act of 2001*. Principals of these schools were left with the difficult task of explaining to their parents that their top-graded school was not making adequate progress toward federal education educational goals.

In contrast to the penalties placed on failing schools under the federal plan, the state accountability plan offered rewards in the form of an associated school recognition award plan. The *Florida School Recognition Plan* (2008) provided that each school receiving these awards determined how they would be used, with allowable uses including any combination of bonuses paid to faculty and staff, purchase of classroom equipment and materials, or salaries for temporary personnel.

Significantly, the *Florida School Recognition Plan* (2008) provided these awards for all schools earning a letter grade of A, but also provided the same incentive and recognition to any school that raised its grade by at least one letter. This practice may have been the sharpest distinction between the growth-focused state plan and the goal-focused federal plan.

Accountability and Public Charter Schools

Public charter schools became one of the fastest-growing innovations in PK-12 education, and expanded from only a scant handful of schools at first to 3,292 schools as of 2005 (National Center for Education Statistics, 2007). In Florida, the number of public charter schools increased from 5 in 1997 to 389 in 2008 (Florida Department of Education, 2009a).

Public charter schools were free of certain controls placed on other public schools, especially collective bargaining agreements with employee associations, district hiring and staffing practices, and district curriculum decisions. In Florida, public charter schools had to implement the official state curriculum (known as the Sunshine State Standards and the related Curriculum Frameworks), and student achievement was measured using the state accountability examination, known as the Florida Comprehensive Assessment Test (FCAT).

The rapid growth of public charter schools, especially in Florida, suggested that they appealed to many students, parents, and educators. Principals, in particular, may have been attracted to charter schools by the wide latitude and great independence provided under the authorizing legislation, such as being freed from union contract rules regarding teacher assignments and work day. By having expanded authority to do as they chose in their schools, principals of charter schools may have believed that they had a greater chance of leading their school to success, especially in contrast to principals at other public schools who first had to comply with many state laws, district policies, and employee association agreements.

This trade-off of relaxed requirements in exchange for greater accountability was the essence of the charter school concept. A charter school had to achieve the goals set for it, or any number of accountability measures could have ended its existence: a sponsoring school board might have revoked its charter, a management company might have closed it down, or parents might simply have taken their children elsewhere. Hill, Lake, and Celio (2002) held that in many respects, charter schools were not fundamentally different from district-run schools intended for similar populations, but that where they were “truly unique is in their accountability (p. 4).”

Given that the *No Child Left Behind Act of 2001* required states to set expectations of 100% proficiency (*No Child Left Behind Act of 2001*, 20 U.S.C. § 6316, 2002), it seemed likely that principals of all schools would have had at least some doubts about their ability to meet those expectations. However, given the greater latitude afforded to principals of public charter schools, these principals may have been more confident that their schools would reach these 100% proficiency goals.

This belief in one’s own capacity—in the form of principal motivation and self-efficacy beliefs related to achieving student progress while working under two different accountability systems—formed the theoretical basis for this study.

The Purpose of the Study

The purpose of this study was to determine to what degree principals believed the goals of the federal and state accountability measures were actually attainable, and to what degree they believed their efforts actually help achieve these goals.

The Theoretical Basis Of The Study

The theoretical model in this study recognized that the accountability movement as characterized by the *Florida A+ Accountability Plan* (2006) and the *No Child Left Behind Act of 2001* (2002) required principals to lead their schools so that their students attain expectations that were not only high, but which were extraordinarily high. These principals (and, of course, the teachers) were working in a potentially stress-inducing situation, as these expectations were designed to increase over time.

Such high-stakes testing programs were found to increase teacher stress and lower teacher morale (Abrams, Pedulla, & Madaus, 2003). Given that the direct accountability for these same high-stakes tests were being applied personally and professionally to the principals, it was reasonable to expect that their stress and morale would follow that of teachers.

If these needs were left unanswered, then a corresponding drop in principal self-efficacy belief could have resulted, and a related decrease in actual performance could have ensued. Bandura (1997a) described the patterns in the performance of workers with low self-efficacy as follows:

...people with a low sense of efficacy avoid difficult tasks. They have low aspirations and weak commitment to their goals. They turn inward on their self-doubts instead of thinking about how to perform successfully. When faced with difficult tasks, they dwell on obstacles, the consequences of failure, and their personal deficiencies. Failure makes them lose faith in themselves because they blame their own inadequacies. They slacken or give up in the face of difficulty, recover slowly from setbacks, and easily fall victim to stress and depression (p. 5)

Up to some point, high expectations and the professional orientation of principals should have interacted in a positive way, with each reciprocal effect contributing to the

other, just as the personal, environmental, and behavioral factors that influence self-efficacy beliefs contribute to each other. However, as the environmental variable of being a Title I school subjected to the high standards and severe sanctions of the *No Child Left Behind Act of 2001* (*No Child Left Behind Act of 2001*, 20 U.S.C. § 6316, 2002), came into play, this interaction could have been foiled had the principal failed to believe in the fundamental attainability of the goal, failed to believe in the likelihood of consequences for failure, or failed to believe that the expectation would actually exist for long enough to matter.

In this scenario, the personal non-beliefs could not be reconciled with the requirements for acting on them, and so two of the three directions of reciprocity were lost. Bandura (1986) held that such circumstances could lead to a general effect of diminished self-efficacy in which the only reciprocity that remained was the classical behaviorist link of environment and behavior, or stimulus and response. In this diminished model, the only effective modifier or motivator of behavior that remained was the non-cognitive one.

The importance of the personal factor of outcome expectancy was also described in expectancy-valence models, including Vroom (1964). In Vroom's model, three factors also combined to contribute to motivation: valence, instrumentality, and expectancy. Applying this model to the circumstance of principals facing the goals established by the *No Child Left Behind Act of 2001* (2002) and the *Florida A+ Accountability Plan* (2006), the valence would have been the degree to which the principals valued the extrinsic motivator (for example, the grade or rating itself, or, more problematically, the benefit of

keeping one's job). The instrumentality would have been the level of confidence the principals felt in the causal relation between their actions (such as decision-making, curriculum planning, and staffing) and the intended outcome. The expectancy would have been the degree to which the principals believed that the extrinsic motivator would be provided if the goal was met. In Vroom's model, each of these factors could have been assigned numeric values, and then multiplied to arrive at an abstracted motivational measurement, which Vroom labeled as force, and which represented the result of all the directions and magnitudes of the separate factors. Force, in Vroom's model, corresponded to the totality of the pressure on the person to behave in the desired manner.

Bandura (1986) acknowledged that Vroom's model did, in fact, predict performance but found also that the inherent assumption of objective rationality diminished the usefulness of the model. In Bandura's (1986) view, people often had incomplete or mistaken information about the range and type of alternatives that were available for a given course of action, and that they may have made decisions that were internally rational but which could have appeared to be irrational to others.

Bandura (1986) also noted that Vroom's model partially accounted for personal opinions of one's own agency (in the form of the belief that hard work would result in the desired outcome) but found that it incompletely accounted for the social cognitive factors that affected such beliefs. This limitation was especially relevant given the possibility that principals may not have believed that it was possible for the goals of these accountability plans to have been met, or may not have believed that the accountability plans themselves would survive long enough for their own deadlines to arrive. These

were nuanced, subjective beliefs which were likely to vary widely from individual to individual. Unlike expectancy theory, social cognitive theory accounted for the possibility that one's sense of self-efficacy might have been modified by the belief that one's work would not result in the stated goal.

Moreover, Bandura (1997b) noted that in many cases, higher goals motivated people to work harder to attain them, but only if they remained strongly committed to them over time. Even when assigned to reach goals well beyond attainability, people did attempt to reach them so long as there was no cost in failing to reach them. This distinction about cost was critical in the case of the goals of the *No Child Left Behind Act of 2001*, which entailed serious consequences for principals of Title I schools who failed to meet them (*No Child Left Behind Act of 2001*, 20 U.S.C. § 6316, 2002). Instead, Bandura (1997b) found that

unattainable goals are more likely to be abandoned when the activities require extensive investment of effort and resources, failure to meet the goals produces negative consequences, and other activities are available in which one's efforts might be more fruitfully invested. (p. 134)

Each of these three factors encouraged goal abandonment and were arguably present in the goals and sanctions of the *No Child Left Behind Act of 2001* (2002). This was also true of the *Florida A+ Accountability Plan* (2006), although less so. If principals regarded the goals of the *No Child Left Behind Act of 2001* (2002) as simply unattainable, Bandura's model suggested that these principals would likely have abandoned serious efforts toward goal attainment. If so, this would have counteracted the intended effect of the high goals promoting high effort, and would have instead perversely helped to guarantee failure to reach the goal.

Research Questions

The research questions associated with this problem were related to these seemingly contradictory assessment and accountability systems.

1. To what extent do Florida principals believe that they possess the instructional and leadership efficacy to bring about the 100% proficiency levels required by *No Child Left Behind Act of 2001* (2002)?
2. To what extent do Florida principals believe that they possess the instructional and leadership efficacy necessary to bring about the learning gains necessary to earn a grade of “A” on the *Florida A+ Accountability Plan*?
3. To what extent do personal factors of experience, academic preparation in education, and expectations about these federal and state accountability measures affect these principal self-efficacy beliefs?
4. To what extent do environmental factors of school governance and the socio-economic status of students affect principal self-efficacy beliefs regarding these federal and state accountability measures?

These research hypotheses reflected an expectation that Florida principals were familiar with and accustomed to the requirements of the *Florida A+ Accountability Plan* (2006), and would tend to have higher self-efficacy beliefs about their ability to produce the required results. Given that principals of public charter schools had greater freedom to make major changes in curriculum, instruction, and staffing decisions, these principals would tend to have higher self-efficacy beliefs about their ability to meet the goals of this accountability plan. Given that the 100% proficiency level required by the *No Child Left*

Behind Act of 2001 (2002) was extraordinarily high, it was expected that principals at all schools would show low self-efficacy beliefs related to these goals.

Definitions

The following definitions applied throughout this study:

Adequate yearly progress determination: A “yes,” “no,” or “NA” rating issued annually for each school by the Florida State Department of Education according to requirements of the *No Child Left Behind Act of 2001* to indicate whether or not the school had achieved the minimum student performance requirements for that year under the federal law.

Behavioral factor: Characteristics of a principal’s recent leadership behavior toward seeking the goals of federal or state accountability plans, including (a) an instructional leadership variable indicating the degree of change the principal had made in the school’s curriculum or instruction practices; and (b) a human resource management variable indicating the degree of change the principal had made in the school’s instructional staffing.

Environmental factor: Characteristics of the school where a principal worked, including (a) the accountability variable of whether or not the school received Title I funds; (b) a governance variable identifying the school as a district-operated school or as a charter school; (c) a school level variable that identify the school as serving elementary, secondary, or other grade levels or combinations of grade levels; and (d) an

accountability status variable indicated the school's most recent school grade or most recent adequate yearly progress (AYP) determination.

Florida School Grades: The State of Florida school accountability plan as amended by the *Florida A+ Accountability Plan*.

No Child Left Behind Act of 2001: The federal accountability plan created in the *No Child Left Behind of 2001*.

Personal factor: Personal characteristics of a principal including (a) an experience variable indicating the total years of experience in education; (b) a professional preparation variable indicating whether or not the principal held a degree from a school or college of education; (c) a consequential expectation variable collected as the principal's scaled belief in the likelihood of personal or professional consequences for failing to achieve the goals of accountability plans; and (d) a temporal expectation variable collected as the scaled belief of the principal that an accountability plan would continue to exist in the future.

School grade: A rating of "A," "B," "C," "D," "F," or "NA" issued annually for each school by the Florida State Department of Education according to requirements of the *Florida School Grades Plan* to indicate whether or not the school had achieved the minimum student performance requirements for that year under the state law.

Self-efficacy belief: A person's conviction that they possess the personal capacity to successfully bring about the intended outcome for a given situation.

Assumptions

Assumptions made during the course of this study included:

1. Principals of district-operated schools and charter schools would be able to access a Web-based survey instrument;
2. Principals would respond honestly and accurately to the Web-based survey instrument;
3. Principal self-efficacy beliefs could be accurately assessed using a Web-based survey instrument.

Population and Sample

The population of the survey included 360 principals in Florida. The population was comprised of principals of district-operated public schools and public charter schools in the School District of Brevard County (108 principals), the School District of Lee County (103 principals), and the School District of Polk County (149 principals). The sample included 112 principals who responded to an anonymous Web-based survey.

Statistical Procedures

The study used the following statistical procedures:

1. Descriptive statistics were used to examine self-efficacy beliefs of principals, with personal variables of years of experience in education, and whether or

not any degree in education was held; and with school variables to include Title I designation, whether the school was a traditional school or a charter school, the most recent school grade under the *Florida School Grades Plan*, and the most recent determination of adequate yearly progress under the *No Child Left Behind Act of 2001*.

2. To determine the extent to which Florida principals believed they possessed the instructional and leadership efficacy related to each accountability measure, a paired samples t-test was used to determine any statistically significant mean difference in scores from survey question 3, regarding the *No Child Left Behind Act of 2001*, and survey question 4, regarding the *Florida School Grades Plan*.
3. A Pearson product-moment analysis was used to test for any correlation between self-efficacy beliefs and degree to which principals believe the goals of each accountability plans to be attainable as indicated by responses to survey questions 5 and 7.
4. A Pearson product-moment analysis was used to test for any correlation between self-efficacy beliefs and degree to which principals had acted to achieve the goals of each accountability plans as indicated by responses to survey questions 6 and 8.
5. To determine the extent to which personal factor variables of experience, academic preparation, and expectations about the accountability plans affected self-efficacy beliefs, multiple regression analysis was used.

6. Multiple regression was used to determine the extent to which the environmental variables of accountability, governance, and most recent student performance affect self-efficacy beliefs related to the accountability plans.

Significance of the Study

This study investigated how social cognitive theory explain principal motivation related to state and federal accountability measures. The study also used social cognitive theory to account for variations in principal self-efficacy belief and in leadership behaviors related to *No Child Left Behind* and the *Florida School Grades Plan*.

The study provided potentially useful information in understanding how social cognitive theory can be applied to specific self-efficacy environment of school principals faced with highly-challenging accountability measures that included high-stakes consequences. The study also demonstrated that social cognitive theory can be used to provide potentially useful information for educational policy development and refinement.

Limitations

The limitations of this study were as follows:

1. This was not a causal study, and no attempt was made to determine the degree or direction of causality for any variable or effect. The study is limited to descriptive statistics and correlational statistical tests.

2. This study included only public schools (including public charter schools) in Florida. Non-public schools (including private schools, parochial schools, and other religious schools) were not included in the study.
3. For research questions 3 and 4, which concerned the effects of personal and environmental variables on principal self-efficacy beliefs, the study excluded data from principals of schools intended primarily for adults and schools that combined elementary and secondary grade levels.
4. The study did not differentiate between those schools that received ESEA Title I, Part A grant funds on a targeted selection model and those that received funds on a school-wide model.
5. School data was reported by the principals who chose to respond to the survey, and was not verified by the researcher.
6. The truthfulness, candor, and common understanding of the survey participants regarding the accountability measures being investigated was assumed but not verified.
7. The moderate response rate could have reduced the degree to which the sample was representative of the population.

Organization of the Dissertation

Chapter 1 described the rise of federal and state accountability measures for schools the rapid proliferation of charter schools. Chapter 1 also provided summary information regarding the study's purpose, theoretical basis, research questions,

definitions, assumptions, population, sample, statistical procedures, significance, and imitations. Chapter 1 concluded with a description of how the dissertation was organized. Chapter 2 provided the results of an extensive literature review, including key findings from previous research, the research questions and related hypotheses, and a discussion of the theoretical basis of the study. Chapter 3 described the data collection and analysis procedures used in the study. Chapter 4 described in detail the results of the statistical tests performed on the collected data. Chapter 5 discussed the findings of the study, including discussions of each of the key factors in the self-efficacy model, limitations of the study, policy implications of the study, and recommendations for future research.

Summary

Chapter 1 described how widespread expectation of accountability for results and a growing tolerance for privatization of public services have affected schooling in the U.S., most notably in the rise of federal and state accountability measures for schools, and in the rapid proliferation of charter schools. Under the leadership of Governor John E. “Jeb” Bush at the state level and of President George W. Bush at the federal level, two school accountability measures redefined the mission and assessment of Florida public schools. The *Florida School Grades Plan* in 1996 and the *No Child Left Behind Act of 2001* introduced powerful new accountability plans to public schools, changing the work and expectations of school principals. These two leaders also promoted the creation of charter schools, thereby creating a privatized market-driven approach to creating, funding, governing and assessing schools. Hailed as fundamental and sweeping changes,

these new approaches to public schooling put considerable pressure on school principals to lead their schools to unprecedented levels of student achievement. Within this profoundly-altered educational environment, the motivation and leadership behavior of principals was of central importance. Chapter 2 will address how principal motivation and leadership can be investigated using the social cognitive theory construct of self-efficacy beliefs.

CHAPTER 2: LITERATURE REVIEW

Introduction

As described in Chapter 1, the *Florida School Grades Plan* and the *No Child Left Behind Act of 2001* created unprecedented expectations for schools, and for the principals who led them. All Florida schools received a annual letter grade under the state plan and an annual assessment of progress toward universal student proficiency under the federal plan.

The accountability plans were complex and the expectations were extraordinarily high. Principals faced personal and professional consequences for failing to meet the goals of these two plans. Understanding the eventual success or failure of these plans required understanding the motivations and leadership behavior of the school principals who implemented them. Chapter 2 will discuss how social cognitive theory allows for principal motivation and leadership behavior to be investigated using the construct of self-efficacy beliefs. This review of literature will be used to inform study of the research questions in this study:

1. To what extent do Florida principals believe that they possess the instructional and leadership efficacy to bring about the 100% proficiency levels required by *No Child Left Behind* (2002)?
2. To what extent do Florida principals believe that they possess the instructional and leadership efficacy necessary to bring about the learning gains necessary to earn a grade of “A” on the *Florida A+ Accountability Plan*?

3. To what extent do personal factors of experience, academic preparation in education, and expectations about these federal and state accountability measures affect these principal self-efficacy beliefs?
4. To what extent do environmental factors of school governance and the socio-economic status of students affect principal self-efficacy beliefs regarding these federal and state accountability measures?

The Construct of Self-Efficacy

Motivation is a complex issue, and one of the most important constructs from social cognitive theory related to motivation is that of self-efficacy. Since the first identification of the construct by Bandura (1977), a rich literature developed around investigating the construct and identifying its influence on individual and collective behavior. His original definition of perceived self-efficacy was “the conviction that one can successfully execute the behavior required to produce the outcomes” (Bandura, 1977, p. 193). More specifically, he described self-efficacy belief as a person’s belief in their ability to “organize and execute courses of action required to attain designated types of performances” (Bandura, 1986, p. 391). He later noted that self-efficacy beliefs concern “one’s capabilities to organize and execute the courses of action required to manage prospective situations” (Bandura, 1995, p. 2).

This construct accounted for a number of effects on individual and group motivation, and was defined as one’s belief in one’s own agency, or one’s ability to act in

ways that were important and effective. Bandura, Barbaranelli, Caprara, and Pastorelli (1996) found that this belief in self-efficacy influences:

aspirations and strength of goal commitments, level of motivation and perseverance in the face of difficulties and setbacks, resilience to adversity, quality of analytic thinking, causal attributions for successes and failures, and vulnerability to stress and depression. (p. 1206)

Self-efficacy was seen to substantially affect motivation for most actions. Apart from self-efficacy belief, Bandura, et al. (1996) found little incentive for any person to take any action. The behaviorist view was that action was determined by immediate consequences, but the social cognitive view was that behavior was actually motivated by a more sophisticated and conscious conception of the aggregate consequences of the behavior (Bandura, 1977).

In social cognitive theory, self-efficacy belief accounted for complex patterns of behaviors as being based on complex beliefs, nuanced expectancies, and multiple sources of information. Higher determinations of self-efficacy were associated with higher resilience, greater ability to sustain stress, and improved performance (Bandura, 1997b). Self-efficacy beliefs were such powerful modifiers of behavior that even faulty or unfounded beliefs about self-efficacy could affect behavior. Low self-efficacy beliefs could also lead to poor performance, which further lowered the self-efficacy belief in a “vicious downward cycle” (Bandura, 1997a).

Self-efficacy was distinguished from other perceptions about the self, such as self-concept, self-worth, and self-esteem, in two important aspects: it was related to a specific skill or capacity, and it was not innately linked to other self-perceptions (Goddard, Hoy, & Woolfolk, 2004). Self-concept, for example, was a broad term that applied to a

person's general image of self, whereas self-efficacy was very context-specific. People may have had a high self-efficacy belief concerning one skill, such as cooking, and a low self-efficacy belief about another skill, such as skateboarding. If there was no special importance attached to these skills, then there would have been no corresponding affect on overall self-concept. People who believed that they were poor at skateboarding may have had a very high general opinion about themselves and their abilities if skateboarding itself was of little importance to them.

Locus of control was another self perception that was related to self-efficacy beliefs, but which was distinct from it. Locus of control was largely concerned with beliefs about causality, but not with one's personal efficacy. In Bandura's (1977) example, belief that a grade in a mathematics course was dependent on attainment of mathematical concepts was merely belief about causality, but "...a child who fails to grasp arithmetic concepts and expects course grades to be dependent entirely on skill in the subject matter has every reason to be demoralized" (p. 204). The combination of the child's social cognitive belief about his or her own mathematical efficacy along with the causal belief was a more powerful modifier of behavior than the simple causal belief by itself.

Self-efficacy beliefs were also distinguished from other types of self-interpretation in that they were about perceived ability rather than about actual ability. In a 1991 study of junior and senior high school students, Bouffard-Bouchard, Parent, and Larivee found that students with higher sense of self-efficacy about their ability in writing and reading comprehension were more successful in completing writing and

reading tasks than students with a lower sense of self-efficacy, even when their actual skills level were known to be the same. Students with a high sense of self-efficacy were significantly better at the self-monitoring of their working time, and significantly more likely to persist at completing tasks than similarly-skilled students with lower self-efficacy beliefs.

Self-efficacy beliefs also included agency beliefs about groups of which one was a member. However, collective self-efficacy was more than simply a collective measure of individual self-efficacy, but was a more complex assessment of the group itself as conducted by its members (Bandura, 2000b; Fernández-Ballesteros, Díez-Nicolás, Caprara, Barbaranelli, & Bandura, 2002.)

Bandura's Triadic Reciprocity

Complexities such as collective self-efficacy were anticipated in the earliest conceptions of social cognitive theory, which included the fundamental principle of reciprocal causality. This principle described how cognitive, affective, and biological events, along with behavioral structures and effects of the environment all influenced each other (Bandura, 2001).

This mutual influence was described in Bandura's original model by the principle of reciprocal determinism, in which personal or cognitive factors, behavior, and the environment affected each other continuously in all directions of causality (Bandura, 1978). Bandura conceived self-efficacy as being created within a system of triadic reciprocity as shown in Figure 1.

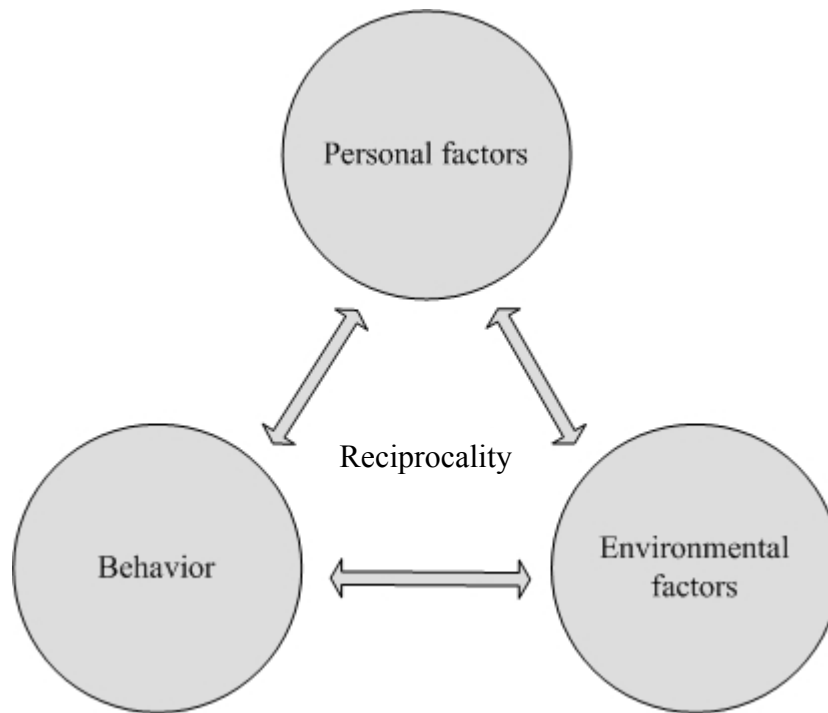


Figure 1: Triadic Reciprocity in Social Cognitive Theory.

Adapted from “The Self System in Reciprocal Determinism,” by A. Bandura, 1978, *American Psychologist*, 33(4), p. 345. Copyright 1978 by the American Psychological Association, Inc. Adapted with permission.

A sense of self-efficacy in an individual was thus drawn from all three of these sources. For example, an individual may have been sufficiently aware of some immutable personal trait that they deliberately chose a suitable environment that was nurturing (or at least tolerant) of that trait, and the implementation of this choice thus heightened that person’s perception of self-efficacy. This triadic reciprocity was an important point, because it differentiated social cognitive theory from the behaviorist theory with which it was sometimes confused. Behaviors were understood to be reinforced in social cognitive

theory, but they were also understood personally by the person for whom they had been reinforced, and so they became controllable variables. Pick up tense correction here

The direction of causality was understood to be reciprocal, but difficult to quantify in either direction. It was not clear, for example, when a high self-efficacy belief for a particular task leads to a high level of performance of that task, or when a high level of performance on a particular task leads to a high sense of self-efficacy. Pajares and Johnson (1996) noted that this chicken-and-egg problem was fundamental to much research into self-concept, and that the recursive nature of human motivation and performance made it unlikely that this problem has a knowable solution.

Understanding the direction of causality did not appear to be necessary to developing practical approaches to increasing self-efficacy. For example, Bandura (2000b) identified guided mastery as one of the most effective ways of improving specific competencies and related self-efficacy. In this approach, subskills related to generalized skill set were identified, and gradual mastery experiences in the subskills led to improved overall competency and improved self-efficacy belief for the general skill. For example, this was a common technique for teaching technology skills to adult learners.

Teacher and Principal Self-Efficacy Beliefs

Whatever the direction of causality of teacher self-efficacy beliefs may have been, there was strong evidence that such beliefs were correlated with student achievement (Caprara, Barbaranellia, Stecab, & Malone, 2006; Liem, Lau, & Nie, 2008; Pajares & Johnson, 1996; Pajares & Miller, 1994). Teacher self-efficacy beliefs were found to have

a complex nature. In particular, Gibson and Dembo (1984) defined teacher self-efficacy as including two separate but related dimensions: a specific belief in personal teaching efficacy (a teacher's perception of his or her own ability to teach well) and a generalized belief in teaching efficacy (a perception of the degree to which any teacher could overcome external variables such as intelligence and socioeconomic status). The second dimension was not seen as a measure of collective self-efficacy, but instead as a ground condition that applied to all teachers.

Distinguishing these two dimensions proved difficult, especially since there was some evidence that teachers considered their own personal ability when responding to questions that were phrased in general terms regarding all teachers (Deemer & Minke, 1999). In fact, the differentiation effects noticed in earlier studies may have been due in part to alternating positive and negative phrasing in survey items as prepared by Gibson and Dembo (1984), but it has not been established that teacher efficacy was a unified, one-dimensional belief (Deemer & Minke). There does seem to be a consensus that the dimension of personal teaching efficacy was better understood (Tschannen-Moran & Hoy, 2001). General teaching efficacy had been shown to be affected by environmental variables such as a school's staffing structure. In a study of four central Florida school districts, Kennedy (1996) found that general teaching efficacy beliefs were higher among prekindergarten teachers teaching in schools in which they were the only prekindergarten teacher. Personal teaching self-efficacy beliefs influenced factors beyond the teacher's own behavior. Bandura, Barbaranelli, Caprara, G. and Pastorelli, C. (1996) noted that

teachers with low self-efficacy beliefs acted in ways that discouraged parent involvement in the classroom.

Principal Self-efficacy: The “Elusive” Construct

Teacher self-efficacy was studied to a greater degree than principal self-efficacy. Ketelle (2005) found much work regarding self-efficacy in psychology, teacher education, and in business management settings, but found no such work in the area of school leadership. Smith, Guarino, Strom, and Adkins (2006), noted a sparsity in the research literature regarding principal self-efficacy beliefs as compared to the extensive study of teacher and student self-efficacy beliefs. The relative dearth of research into principal self-efficacy beliefs left important gaps in understanding how principals were motivated to accomplish the very difficult tasks set before them.

One significant line of research regarding principal self-efficacy was the development of instruments suitable for identifying it and measuring its nuances. What seems to have been a key even in this process was the development of the Principal Sense of Efficacy Scale (PSES) that was refined by Tschannen-Moran and Gareis (2004). Previous efforts at developing a suitable instrument were mixed (Dimmock & Hattie, 1996; Goddard et al., 2004). The Tschannen-Moran and Gareis study began with a revamping of their own Teacher Sense of Efficacy Scale (TSES) that had been described by Tschannen-Moran and Hoy (2001). This instrument included new items with 6-point Likert scales that were aligned with the professional standards articulated by the Interstate School Leaders Licensure Consortium. This approach yielded 18 items that

were clustered in three broad areas of principal behavior (management, instructional leadership, and moral leadership) which could be drawn out in subscores.

Smith et al. (2006) used items with a more-focused 4-point Likert scale in the leadership domains of instructional leadership and management. Their Principal Self-Efficacy Survey instrument also included separate items regarding principal beliefs about the effectiveness of their leadership behaviors and items asking principals to estimate the amount of time they customarily spend engaged in such leadership behaviors. This instrument also included a single item assessing principal expectancy beliefs about their leadership behaviors.

Such instruments showed promise because they might have helped provide comparable measures for what the Tschannen-Moran and Gareis (2004) called an “elusive” construct (p. 583). Self-efficacy was context-specific, which made it difficult to develop a reliable measure across even closely-related contexts.

An operational obstacle was that the self-efficacy beliefs of leaders were related to the general sense of self-confidence. However, the trait of self-confidence alone did not adequately account for all variability in self-efficacy beliefs. Self-efficacy beliefs varied significantly within individuals and were found to be task-specific and situation-specific (Bandura, 1986).

Tschannen-Moran and Gareis (2004) held that the study of principal self-efficacy beliefs was a “promising, but largely unexplored” (p. 573) path to gaining greater understanding about the motivation and behavior of school principals given the current concerns for accountability and school reform. The body of leadership theory and

literature that already existed for explaining principal motivation may have benefited from a more thorough investigation of this construct. This was especially true since there were important structural overlaps of social cognitive theory and of other leadership behavior theories.

For example, a traditional inquiry into principal behavior regarding these accountability measures might have looked at initiating structure and consideration. The dimension of initiating structure was largely transactional in nature, in that it centered on task-oriented behaviors of the leader such as making expectations clear, scheduling work to be done, encouraging the use of uniform or preferred methods, and clarifying work roles. The consideration dimension, however, was at least partly transformational in that it centered on relationships and processes, such as creating collaborative and cooperative working environments, and having concern for the individual performance and well-being of followers.

This classification of leadership behavior into two dimensions of initiating structure and consideration was first done in 1953 (Fleishman) and became the basis for a popular leadership assessment instrument known as the Leader Behavior Description Questionnaire (Halpin, 1957; Stogdill & Coons, 1957), usually referred to as the LBDQ. Some researchers and theorists believed that the usefulness of this approach had come to an end. For example, David Boje at New Mexico State University found that this behaviorist approach to leadership study was far more transactional than transformational (Boje, 2000). This criticism held that the two-factor model defined by Fleischman (1953)

at Ohio State University had become outdated, or at least insufficient to describe the complexities of leadership in modern organizations.

Moreover, given the cash bonuses to schools that were part of the Florida accountability plan and the stern punishments included in the federal accountability plan, it seemed clear that the expectations of the two accountability systems being studied clearly described a highly behaviorist model for schools. Each provided an elaborate system of measurement, rewards, and punishments to promote compliance by school districts, schools, and principals.

These measurements and consequences were intended to create desirable principal and teacher behavior, most likely in the behaviorist sense of seeking rewards and avoiding punishment. There was some support for the idea that teacher motivation was related to teacher perceptions of principal leadership behavior (Pitre, 2003), and principal self-efficacy beliefs about their capacity to bring about intended outcomes were directly related to their actual behaviors in seeking those outcomes (McCormick, 2001).

Principal self-efficacy beliefs were also associated with perseverance in dealing with difficult problems (Osterman & Sullivan, 1996). However, neither the *No Child Left Behind Act of 2001* nor the Florida *A+ Accountability Plan* included any measures to assess or consider principal or teacher beliefs about the attainability of each plan's goals.

The Ohio State University two-factor model combined elements of both scientific management (in its focus on the initiating structures dimension) and the human relations movement (in its focus on the consideration dimension). This could also have been said of both the *Florida A+ Accountability Plan* (2006) and the *No Child Left Behind Act of*

2001 (2002) in that both programs focused on close and frequent measurements of production and output (in their heavy reliance on annual standardized testing) and on complete equity in opportunity and outcomes for all students. However, both plans purposefully created an environment in which the principal was held personally accountable for extraordinarily high levels of performance.

In the view of Rouse, Hannaway, Goldhaber, and Figlio (2007), this accountability felt by principals was accomplished through three mechanisms of stigma (in the form of the school grade itself), oversight (from the state of Florida), and competition. The mechanism of competition in the Florida plan went well beyond collegial competitiveness and took the form of actual loss of students, and the funding that followed them. Until the practice was found to be unconstitutional by the Florida Supreme Court in 2006, the Florida plan provided students in low-graded schools with private school vouchers known as opportunity scholarships (Rouse, Hannaway, Goldhaber, & Figlio, 2007).

These various mechanisms combined to create a tremendously high expectation for school performance, and thus for principal leadership. This was especially important for this particular cohort of principals precisely because of the transformational leadership tradition that surrounded both the study and practice of the principalship.

For school principals who completed teacher preparation programs, conducted their teaching careers, or assumed their first leadership roles during the effective schools movement of the 1980s, this tradition came to them in the form of expectations for instructional leadership. These principals likely regarded themselves as the instructional

leaders of their schools for their entire careers, whether or not they actually attained the high level of performance expected in the effective schools concept. In actual practice, principals tended to see themselves as sharing instructional leadership with their teachers, as witnessed in later innovations such as learning communities, teacher career ladder programs, efforts to professionalize teaching, and the inclusion of teachers on school improvement and leadership teams. Principals of this era were also likely encouraged to implement transformational leadership practices, such as purposefully and collegially improving the skills of teachers in pursuit of specific achievement goals, as opposed to purely transactional practices such as providing incentives for performance without any effort at elevating motivation or improving skills of teachers.

Principal Self-Efficacy Beliefs and Instructional Leadership

Studies of principal self-efficacy which had been done were often focused on the leadership dimension of instructional leadership. A trend in such research was for there to be little if any evidence of correlation of environmental factor variables with self-efficacy beliefs. There were also occasional findings where personal factor variables showed no significant effect on principal self-efficacy beliefs. This pattern of findings did not seem to have a clear explanation, nor was it clear why it seemed to be specific to school principals. There were also examples of counterintuitive findings related to principal self-efficacy beliefs and environmental factors.

Lloyd-Zannini (2001) could find not find any correlation between principal self-efficacy beliefs and the perceived quality of the gifted education program in those

principals' own schools, except in the case of private, non-faith-based schools. Working out the implications of this finding proved difficult, since only 15% of the private schools in this study offered gifted education programs.

In a study of 94 principals across the state of Florida, Waskiewicz (2002) found no correlation between principal self-efficacy beliefs and length of experience as a principal, school level, or district size. Using the same instrument (the Principal Self-Efficacy Questionnaire) as had been used by Dimmock and Hattie (1996), Waskiewicz found that female principals had a significantly higher sense of self-efficacy than did male principals, where Dimmock and Hattie found no gender difference.

In an Auburn University study of the leadership self-efficacy beliefs of principals in twelve states (Smith et al, 2006), a large majority of principals (80%) reported that their instructional leadership practices had a positive effect on student learning. It was perhaps not surprising that principals had positive self-efficacy beliefs about their own instructional leadership, but the study also found that this belief increased in larger schools with more complex populations and in schools with higher proportions of students eligible for free and reduced-price lunch. The authors avoided drawing conclusions as to why this might be so, but noted that principal self-efficacy beliefs continued to be an area in need of further study.

Lehman (2007) found that high principal self-efficacy beliefs were associated with higher student achievement in reading on a fifth-grade Wisconsin standardized reading assessment. This study of 316 principals also found that schools with higher proportions of students eligible for free and reduced-price lunch tended to have principals

with higher self-efficacy beliefs. The author urged caution in interpretation, noting that more research regarding the variables related to socio-economic status was indicated.

Smith (2007) found that principal self-efficacy beliefs regarding leadership in character education was negatively correlated with school size, such that principals of smaller schools believed themselves to lead better character education programs. This belief in character education efficacy was also associated with a suburban setting, rather than a rural or urban setting. However, no correlation was found between principal self-efficacy beliefs concerning character education leadership and personal variables such as experience, and environmental variables such as school level.

In a study of 102 high school principals in Mississippi, Williams (2008) studied principal self-efficacy beliefs across a range of leadership dimensions to see if these beliefs were correlated with student achievement. No significant correlation was found, however, although some patterns were found in descriptive statistics suggesting that principals of schools with lower ratings in the state accountability plan were somewhat more likely to believe that their leadership in their school involved “breaking away” (p. 108) from past practices in pursuit of student achievement. Further study was recommended, especially research to better investigate the association of environmental factor variables with principal self-efficacy beliefs.

Principal Self-Efficacy Beliefs and Human Resources Management

In a study of principals’ influence over leadership challenges regarding professional development, Wiig (2004) found that principal self-efficacy belief was

unrelated to personal variables such as degree major and degree level or to environmental variables such as school level or the urban-rural population setting of the school.

However, qualitative analysis of principal comments gathered in the study suggested that principals with higher self-efficacy beliefs focused more on school-based professional development problems more within their control, but principals with lower self-efficacy beliefs focused on district-level professional development problems over which they had considerably less influence. Principals with low self-efficacy beliefs reported fearfulness of a “threat to their jobs if they did not comply with district mandates” (p. 73).

Underlying these professionally-oriented approaches was the notion that principals could and should have directly affected the performance of classroom teachers, a concept that Wahlstrom and Louis (2008, p. 459) described “as a fact of life” for principals, but also a “key dilemma” since principals could not regularly participate in every classroom. In their study of how principals extended their reach into classrooms through communicating trust and shared responsibility, they found that teacher self-efficacy beliefs were “paramount” (Wahlstrom & Louis, p. 481) in determining the degree which teacher focused their instruction on the intended subject matter and kept students on task, and noted that effective use of instructional time was an instructional control mechanism that was likely to be subject to influence by principal leadership.

Ross and Gray (2006) found that transformational leadership practices of principals played a significant factor in collective teacher efficacy, but cautioned that principals should strive to create an environment in which teacher beliefs about efficacy were properly linked to actual outcomes to avoid “defeatist downward spirals and

delusional upward spirals” (pp. 183-184). This supported Bandura’s (1997b) caution about the intricate webs of efficacy development in schools interacting with repeated but brief attempts at instructional reform, which he saw as leaving school-based educators particularly vulnerable to viewing any new educational program as being “an exercise in futility” (p. 256).

Despite such cautions, principals were still held by their districts to be accountable for the business and personnel operations involved in running a school and for high (and ever-increasing) levels of student achievement. In fact, the *No Child Left Behind* legislation was quite detailed in its credential requirements for teachers (*No Child Left Behind Act of 2001*, 20 U.S.C. § 7801, 2002) and for education paraprofessionals (*No Child Left Behind Act of 2001*, 20 U.S.C. § 6381d, 2002), but not so for principals. Instead, as did the *Florida A+ Accountability Plan* (2006) that preceded it, this legislation directly held principals accountable only for student achievement—in other words, principals were accountable for the end results, not for the means of getting there. It followed logically that this would have encouraged principals to be outcome-oriented, to have established clear expectations for curriculum and instruction, and to have focused the entire organization on its core mission of working in the initiating structures dimension considered by the Ohio State model. Support for this was found by Smith, Guarino, Strom, Reed, Lamkin, and Rushforth (2003), and by Smith et al. (2006), who reported that principals had strong beliefs that their leadership behaviors would produce higher student learning gains if relieved of external obstacles, and that these beliefs were even higher for principals working with higher populations of low-income students.

What could not be accounted for, however, was how the principal leadership behaviors themselves were formed, especially given how dramatically the expectations of principals had changed. Principals working in the age of accountability found themselves in several rapid and dramatic transitions: from the view of the principal as the instructional leader to the view of the principal as the guarantor of results, and from the role of principal as manager to the role of the principal as entrepreneur.

Principals, did not, however, regard themselves as working alone and independently. Instead, there was evidence that principal self-efficacy belief was strongly related to the perceived beliefs of their supervisors and of those they supervise. Tschannen-Moran and Gareis (2005) studied 558 principals in Virginia to look for a basis for practical applications of social cognitive theory. They found that principals with higher levels of self-efficacy were more likely to believe they received good support from their superintendent and the central office. However, the strongest correlation with high principal self-efficacy belief was support from teachers and other school-based staff, including non-instructional employees. Consistent with Bandura's (1978) concept of triadic reciprocity among and between personal, environmental, and behavior factors, the authors noted that principals

who are supported by their teachers and support staff are more likely to have a robust sense of efficacy, and conversely, principals with strong self-efficacy beliefs seem to be more successful at winning the support of their teachers and staffs...(p. 22).

Tschannen-Moran and Gareis suggested that practical benefit could be derived from making it explicitly clear to central office and school-based staff members that principals regarded their support as being critically important to their work. Moreover, professional

development programs for principals could have applied social cognitive theory concepts in a practical and effective way by having providing master learning experiences, role-playing simulations, observations of effective principals by novice principals, and other strategies designed to promote the development of self-efficacy beliefs. These kinds of practical applications did not require defining any particular direction of causality.

Tschannen-Moran and Gareis held that the promise of such practical applications of social cognitive theory called for more research into how self-efficacy beliefs were formed, especially research that could have weighted the contributions of verbal persuasion, mastery learning experiences, and techniques to promote psychological arousal.

In a mixed-methods study of 538 principals in Montana, Versland (2009) found patterns suggesting potentially important practical implications of principal self-efficacy beliefs. Consistent with the social cognitive theory prediction that mastery experiences contribute to self-efficacy beliefs, the study found that aspiring principals gained heightened self-efficacy beliefs from preparation experiences that enabled them to develop interpersonal skills, and that high self-efficacy was associated with year-long internships they characterized as having breadth and depth. However, the study also found that aspiring principals in internal “grow your own” leadership development programs experienced a loss of self-efficacy after they were chosen for leadership roles, which they believed led to the breakdown of valued personal relationships with former colleagues. As a practical matter, then, internal preparation programs intended to increase

attainment of principal skills and knowledge could have taken into account the potential for such unintended and counterproductive consequences.

Overall Patterns And Trends In The Literature

At least four trends in the research literature seemed apparent. One such trend was the recognition that self-efficacy research in educational settings had been largely focused on student self-efficacy and teacher self-efficacy to the relative exclusion of attention to principal self-efficacy beliefs. The research literature regarding self-efficacy beliefs was extensive, but relatively little work had been done regarding the special case of principal self-efficacy beliefs (Ketelle, 2005; Smith et al., 2006). This was an important gap in the literature, because self-efficacy beliefs were not well-generalized and instead were linked to a specific skill or task (Goddard, Hoy, & Woolfolk, 2004). Understanding principal self-efficacy beliefs required research specific to that topic.

Another trend concerned changes in the understanding of the mutability of self-efficacy beliefs. Hoy and Woolfolk (1993) observed that research in the 1970s and 1980s concerning self-efficacy studies assumed that self-efficacy was the independent variable, but work after that began to conceive that self-efficacy could be a dependent variable. This trend was consistent with the understanding that self-efficacy belief and related personal, behavioral, and environmental variables were reciprocal (Bandura, 1978) and that it was improbable that single lines of causality existed (Pajares & Johnson, 1996). This trend continued to the point that, in 2006, the School Administrator Efficacy Survey (McCollum, Kajs, & Minter) was presented as a practical assessment for measuring the

degree to which principal self-efficacy had been improved during the course of a professional development or principal preparation program.

Another trend seemed to be careful and continuous refinement of the definition and measurement methods of principal self-efficacy beliefs. Although there were some principal self-efficacy studies that used both quantitative and qualitative approaches (Kiefert, 2007; Smith, 2007; Versland, 2009; Wiig, 2004), most used quantitative studies. To support quantitative research, there were repeated efforts to develop valid and reliable instruments for measuring principal self-efficacy.

Tschannen-Moran and Gareis (2004) developed the Principal Sense of Efficacy Scale using 50 items and a six-point scale to assess principal self-efficacy beliefs in the leadership domains of management, instructional leadership, and moral leadership. These 50 items were eventually reduced to 18 by factor analysis. Tshannen-Moran and Gareis noted earlier efforts in creating such instrumentation (Dimmock & Hattie, 1996; Hillman, 1986; Imants & De Bradbender, 1996) but found enough insufficiencies with these instruments to develop their Principal Sense of Efficacy Scale based on the earlier Teacher Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001).

Smith et al. (2006) used a different instrument, the Principal Self-Efficacy Survey, which was also referred to as the PSES. The Principal Self-Efficacy Survey used a 4-point scale to investigate principal self-efficacy in the leadership domains of instructional leadership and management skills. Smith et al. (2006) acknowledged the increasing usefulness of quantitative instruments and analysis to describe principal self-efficacy beliefs, but also suggested that there was a valuable role for future qualitative study.

McCollum, Kajs, and Minter (2006) developed a larger 51-item instrument using a 7-point Likert scale. Their School Administrator Efficacy Survey (SAES) consisted of items designed to assess eight leadership dimensions including instructional leadership and staff development, school climate development, community collaboration, data-based decision making aligned with legal and ethical principles, resource and facility management, use of community resources, communication in a diverse environment, and development of school vision. The authors presented this instrument as a practical tool for use in formative and summative assessments, evaluations of principal preparation programs, and reflective self-assessments by school principals.

The principal leadership domains in these instruments included items related to the content of the six Educational Leadership Policy Standards developed by the Council of Chief State School Officers (2008). These standards were revised after these three principal self-efficacy instruments were developed, but the Principal Sense of Efficacy Scale (Tschannen-Moran & Gareis, 2004), the Principal Self-Efficacy Scale (Smith, Guarino, Strom, & Adkins, 2006), and the School Administrator Efficacy Survey (McCollum, Kajs, & Minter, 2006) contained items that assessed the revised standards. The six statement standards were written in detailed language without official short titles, so the official standard numbers along with descriptive content labels have been used to show how each instrument assesses the leadership standards in Table 1.

Table 1

Leadership Standards Measured in Selected Self-Efficacy Instruments

Leadership standard content area	PSES (2004) ^a	PSES (2006) ^b	SAES (2006) ^c
1. Vision and mission	●	●	●
2. School culture and instructional program	●	●	●
3. Management	●	●	●
4. Collaboration with community	●	●	●
5. Ethical and moral leadership	●		●
6. Advocacy leadership			●

^aPrincipal Sense of Efficacy Scale^bPrincipal Self-Efficacy Scale^cSchool Administrator Efficacy Survey

Finally, the slowly-growing body of research on principal self-efficacy beliefs seemed to reveal some difficulty in identifying which environmental factors were correlated to principal self-efficacy, and, in some cases, which personal factor variables were correlated. As described earlier in this chapter, Dimmock and Hattie (1996), Lloyd-Zannini (2001), and Waskiewicz (2002), Tschannen-Moran and Gareis, 2005; Smith (2007); and Williams (2008) all reported a lack of significant correlation with various environmental or personal factor variables that might logically have been expected to have some influence on principal self-efficacy beliefs. Tschannen-Moran and Gareis (2005) suggested that one possible cause of this lack of correlation might have been a subtle combination of several environmental factors taken together, such as low socioeconomic status of students when also present with low levels of instructional

resources. This pattern of findings did not seem to have a clear explanation, and posed an interesting topic for continued self-efficacy research.

The Theoretical Basis Of The Study

The theoretical model in this study recognized that the accountability movement as characterized by the *Florida A+ Accountability Plan* (2006) and the *No Child Left Behind Act of 2001* (2002) required principals to lead their schools so that their students attain expectations that were not only high, but which were extraordinarily high. These principals (and, of course, the teachers) were working in a potentially stress-inducing situation, as these expectations were designed to increase over time.

Such high-stakes testing programs were found to increase teacher stress and lower teacher morale (Abrams, Pedulla, & Madaus, 2003). Given that the direct accountability for these same high-stakes tests were being applied personally and professionally to the principals, it was reasonable to expect that their stress and morale would follow that of teachers.

If these needs were left unanswered, then a corresponding drop in principal self-efficacy belief could have resulted, and a related decrease in actual performance could have ensued. Bandura (1997a) described the patterns in the performance of workers with low self-efficacy as follows:

...people with a low sense of efficacy avoid difficult tasks. They have low aspirations and weak commitment to their goals. They turn inward on their self-doubts instead of thinking about how to perform successfully. When faced with difficult tasks, they dwell on obstacles, the consequences of failure, and their personal deficiencies. Failure makes them lose faith in themselves because they blame their own inadequacies. They slacken or

give up in the face of difficulty, recover slowly from setbacks, and easily fall victim to stress and depression (p. 5)

Up to some point, high expectations and the professional orientation of principals should have interacted in a positive way, with each reciprocal effect contributing to the other, just as the personal, environmental, and behavioral factors that influence self-efficacy beliefs contribute to each other. However, as the environmental variable of being a Title I school subjected to the high standards and severe sanctions of the *No Child Left Behind Act of 2001* (*No Child Left Behind Act of 2001*, 20 U.S.C. § 6316, 2002), came into play, this interaction could have been foiled had the principal failed to believe in the fundamental attainability of the goal, failed to believe in the likelihood of consequences for failure, or failed to believe that the expectation would actually exist for long enough to matter.

In this scenario, the personal non-beliefs could not be reconciled with the requirements for acting on them, and so two of the three directions of reciprocity were lost. Bandura (1986) held that such circumstances could lead to a general effect of diminished self-efficacy in which the only reciprocity that remained was the classical behaviorist link of environment and behavior, or stimulus and response. In this diminished model, the only effective modifier or motivator of behavior that remained was the non-cognitive one.

The importance of the personal factor of outcome expectancy was also described in expectancy-valence models, including Vroom (1964). In Vroom's model, three factors also combined to contribute to motivation: valence, instrumentality, and expectancy. Applying this model to the circumstance of principals facing the goals established by the

No Child Left Behind Act of 2001 (2002) and the *Florida A+ Accountability Plan* (2006), the valence would have been the degree to which the principals valued the extrinsic motivator (for example, the grade or rating itself, or, more problematically, the benefit of keeping one's job). The instrumentality would have been the level of confidence the principals felt in the causal relation between their actions (such as decision-making, curriculum planning, and staffing) and the intended outcome. The expectancy would have been the degree to which the principals believed that the extrinsic motivator would be provided if the goal was met. In Vroom's model, each of these factors could have been assigned numeric values, and then multiplied to arrive at an abstracted motivational measurement, which Vroom labeled as force, and which represented the result of all the directions and magnitudes of the separate factors. Force, in Vroom's model, corresponded to the totality of the pressure on the person to behave in the desired manner.

Bandura (1986) acknowledged that Vroom's model did, in fact, predict performance but found also that the inherent assumption of objective rationality diminished the usefulness of the model. In Bandura's (1986) view, people often had incomplete or mistaken information about the range and type of alternatives that were available for a given course of action, and that they may have made decisions that were internally rational but which could have appeared to be irrational to others.

Bandura (1986) also noted that Vroom's model partially accounted for personal opinions of one's own agency (in the form of the belief that hard work would result in the desired outcome) but found that it incompletely accounted for the social cognitive factors that affected such beliefs. This limitation was especially relevant given the possibility

that principals may not have believed that it was possible for the goals of these accountability plans to have been met, or may not have believed that the accountability plans themselves would survive long enough for their own deadlines to arrive. These were nuanced, subjective beliefs which were likely to vary widely from individual to individual. Unlike expectancy theory, social cognitive theory accounted for the possibility that one's sense of self-efficacy might have been modified by the belief that one's work would not result in the stated goal.

Moreover, Bandura (1997b) noted that in many cases, higher goals motivated people to work harder to attain them, but only if they remained strongly committed to them over time. Even when assigned to reach goals well beyond attainability, people did attempt to reach them so long as there was no cost in failing to reach them. This distinction about cost was critical in the case of the goals of the *No Child Left Behind Act of 2001*, which entailed serious consequences for principals of Title I schools who failed to meet them (*No Child Left Behind Act of 2001*, 20 U.S.C. § 6316, 2002). Instead, Bandura (1997b) found that

unattainable goals are more likely to be abandoned when the activities require extensive investment of effort and resources, failure to meet the goals produces negative consequences, and other activities are available in which one's efforts might be more fruitfully invested. (p. 134)

Each of these three factors encouraged goal abandonment and were arguably present in the goals and sanctions of the *No Child Left Behind Act of 2001* (2002). This was also true of the *Florida A+ Accountability Plan* (2006), although less so. If principals regarded the goals of the *No Child Left Behind Act of 2001* (2002) as simply unattainable, Bandura's model suggested that these principals would likely have abandoned serious

efforts toward goal attainment. If so, this would have counteracted the intended effect of the high goals promoting high effort, and would have instead perversely helped to guarantee failure to reach the goal.

Theoretical and Practical Dimensions of the Study

Social cognitive theory had been advanced to the point that it described how teacher self-efficacy beliefs were correlated with student achievement (Liem, Lau, & Nie, 2008; Pajares & Johnson, 1996; Pajares & Miller, 1994). Principal leadership behavior had also been demonstrated to have played a significant role in collective teacher efficacy beliefs (Ross & Gray, 2006).

Despite such theoretical advances, principal self-efficacy belief remained an “elusive construct” in the view of Tschannen-Moran and Gareis (2004, p. 583), who developed the Principal Sense of Efficacy Scale (PSES) in order to better describe it. Compared to teacher self-efficacy, principal self-efficacy has been sparsely studied (Ketelle, 2005; Smith et al., 2006).

Rather than continue the development of the Principal Sense of Efficacy Scale (Tshannen-Moran & Gareis, 2004) or the Principal Self-Efficacy Scale (Smith et al., 2006), which was important work that remained to be done, the current study proposed to provide a preliminary application of the basic principles of social cognitive theory to a specific set of principal self-efficacy beliefs. In this study, those self-efficacy beliefs under consideration were not the comprehensive span of school leadership behaviors encompassed in the Principal Sense of Efficacy Scale or in the Principal Self-Efficacy

Scale, but solely to principal beliefs about the landmark federal and state accountability measures which had changed so much about expectations for schools and principals.

The literature review found few published works that compared principal self-efficacy beliefs regarding federal and state accountability plans. To help close this gap, this study investigated how social cognitive theory might have been used to explain principal motivation related to these accountability measures, and how to have accounted for variations in principal self-efficacy belief and in leadership behaviors related to *No Child Left Behind* and the *Florida School Grades Plan*. This study was designed to add to the understanding of how personal and environmental variables might have affected principal self-efficacy beliefs in regard to principal beliefs about the attainability of federal and state goals.

Summary

Chapter 2 described how social cognitive theory as developed in the professional literature allowed for principal motivation and leadership behavior to be investigated using the construct of self-efficacy beliefs. The dimensions of the social cognitive construct of self-efficacy were outlined, beginning with Bandura's original definition of perceived self-efficacy. He described self-efficacy as "the conviction that one can successfully execute the behavior required to produce the outcomes" (Bandura, 1977, p. 193). This definition had been refined and expanded to be descriptive of many types of interactions and circumstances.

In social cognitive theory, self-efficacy belief accounted for complex patterns of behaviors as being based on complex beliefs, nuanced expectancies, and multiple sources of information. Higher determinations of self-efficacy were associated with higher resilience, greater ability to sustain stress, and improved performance (Bandura, 1997b). In contrast, low self-efficacy beliefs could also lead to poor performance, which further lowered the self-efficacy belief in a “vicious downward cycle” (Bandura, 1997a).

Chapter 2 also explained how self-efficacy was distinguished from other perceptions about the self, such as self-concept, self-worth, and self-esteem, in two important aspects: it was related to a specific skill or capacity, and it was not innately linked to other self-perceptions (Goddard, Hoy, & Woolfolk, 2004). Locus of control was also a distinct construct from self-efficacy, in that locus of control was largely concerned with beliefs about causality, but not with one’s personal efficacy.

Self-efficacy beliefs were also distinguished from other types of self-interpretation in that they were about perceived ability rather than about actual ability. People could have had imperfect perceptions about their abilities related to a specific task, and these perceptions played a larger role in affecting their motivation and behavior than did actual skills levels.

There were important and related collective efficacy beliefs as well as self-efficacy beliefs. A person may have possessed beliefs about the abilities of all members of a group in general to accomplish some task that were different than that person’s belief about his or her own ability to accomplish that task. As with most effects of efficacy

beliefs, the interplay between collective efficacy beliefs and self-efficacy beliefs was context-specific.

Chapter 2 also described how Bandura's (1978) concept of triadic reciprocity (sometimes referred to as triadic reciprocal causation) explained how various personal factors, environmental factors, and behavior factors all affected each other in determining self-efficacy beliefs. This triadic reciprocity was a distinguishing element in social cognitive theory, because it differentiated social cognitive theory from the behaviorist theory with which it was sometimes confused. Behaviors were understood to be reinforced in social cognitive theory, but they were also understood personally by the person for whom they have been reinforced, and so they become controllable variables. Social cognitive theory did not concern itself overmuch with direction of causality of reinforcement in any particular direction, since any factor may have been influencing any other factor in continuous and complex ways. The precise direction of causality for any particular factor was typically of little theoretical or practical importance.

Social cognitive theory had been studied in school settings, often in terms of teacher self-efficacy beliefs. It was understood that teacher self-efficacy beliefs were correlated with student achievement (Caprara, Barbaranellia, Stecab, & Malone, 2006; Liem, Lau, & Nie, 2008; Pajares & Johnson, 1996; Pajares & Miller, 1994). Teacher self-efficacy beliefs had been found to have a complex nature. In particular, Gibson and Dembo (1984) defined teacher self-efficacy as including two separate but related dimensions: a specific belief in personal teaching efficacy (a teacher's perception of his or her own ability to teach well) and a generalized belief in teaching efficacy (a

perception of the degree to which any teacher could overcome external variables such as intelligence and socioeconomic status). The second dimension was not seen as a measure of collective self-efficacy, but instead as a ground condition that applied to all teachers. Distinguishing these two dimensions proved difficult, especially since there was some evidence that teachers considered their own personal ability when responding to questions that were phrased in general terms regarding all teachers (Deemer & Minke, 1999).

Despite such complexities in studying teacher self-efficacy beliefs, reviews of the literature demonstrated that teacher self-efficacy had been studied to a considerably greater extent than principal self-efficacy beliefs. This was an important and consistent trend. Ketelle (2005) found much work regarding self-efficacy in psychology, teacher education, and in business management settings, but found no such work in the area of school leadership. Smith et al. (2006), noted a sparsity in the research literature regarding principal self-efficacy beliefs as compared to the extensive study of teacher and student self-efficacy beliefs. The relative dearth of research into principal self-efficacy beliefs left important gaps in understanding how principals were motivated to accomplish the very difficult tasks set before them.

Chapter 2 explained that another significant trend in the literature was a line of research regarding principal self-efficacy had been the development of instruments suitable for identifying principal leadership behavior and for measuring the nuances of related principal motivation. Leadership behavior had for many years been studied in terms of the two dimensions of initiating structure and consideration. This approach was

developed long before the advent of federal and state accountability measures (Fleishman, 1953) and had become the basis for a popular leadership assessment instrument known as the Leader Behavior Description Questionnaire (Halpin, 1957; Stogdill & Coons, 1957), usually referred to as the LBDQ. By the time that the accountability movement arrived in the late 1990s and early 2000s, this approach was seen as having been fully explored.

Social cognitive theory posited a more complicated construct of principal behavior as being modified reciprocally by environmental and personal factors, so new instrumentation was needed to expand understanding of principal behavior and the motivations behind it. Notable instruments for measuring principal self-efficacy included the Principal Sense of Efficacy Scale (PSES) refined by Tschannen-Moran and Gareis (2004) the Principal Self-Efficacy Survey developed by Smith et al. (2006), and the School Administrator Efficacy Survey (McCollum, Kajs, & Minter, 2006). These instruments were devised to align with the principal leadership dimensions outlined by the Interstate School Leaders Licensure Consortium. The development of these instruments was part of a general trend in principal self-efficacy research to use quantitative approaches, although important mixed-model research included qualitative methods (Kiefert, 2007; Smith, 2007; Versland, 2009; Wiig, 2004).

The limited body of research into principal self-efficacy beliefs produced some findings of note. There was some support for the idea that teacher motivation was related to teacher perceptions of principal leadership behavior (Pitre, 2003), and principal self-efficacy beliefs about their capacity to bring about intended outcomes were directly

related to their actual behaviors in seeking those outcomes (McCormick, 2001). The leadership practices of principals were shown to affect teacher collective efficacy beliefs (Ross & Gray, 2006). Consistent with other findings in social cognitive research, principal self-efficacy beliefs were associated with perseverance in dealing with difficult problems (Osterman & Sullivan, 1996). Principals generally reported that their instructional leadership practices had a positive effect on student learning. (Smith et al., 2006). Some studies showed that high principal self-efficacy beliefs were associated with higher student achievement (Lehman, 2007) where others have failed to find evidence of this (Williams, 2008). Principals with low self-efficacy beliefs reported being fearful of losing their jobs if they failed to comply with district mandates, where principals with higher self-efficacy beliefs were less fearful of this (Wiig, 2004). Principals with high self-efficacy beliefs believed that they had strong and productive working relationships with central staff and with school-based employees (Tschannen-Moran & Gareis, 2005).

Chapter 2 also noted a trend in assessing the mutability of principal self-efficacy beliefs, and thus the possibility of practical applications of knowledge of principal self-efficacy beliefs. Hoy and Woolfolk (1993) observed that research in the 1970s and 1980s concerning self-efficacy studies assumed that self-efficacy was the independent variable, but work after that began to conceive that self-efficacy could be a dependent variable. This trend was consistent with the understanding that self-efficacy belief and related personal, behavioral, and environmental variables was reciprocal (Bandura, 1978) and that it was improbable that single lines of causality existed (Pajares & Johnson, 1996). This trend continued when the School Administrator Efficacy Survey (McCollum, Kajs,

& Minter, 2006) was presented as a practical assessment for measuring the degree to which principal self-efficacy had been improved during the course of a professional development or principal preparation program. Versland (2009) found that aspiring principals who participated in a “grow your own” leadership development program experienced an unintended and undesirable loss of self-efficacy after they were chosen for leadership roles, which they believed led to the breakdown of important personal relationships with colleagues.

Despite this progress in understanding principal self-efficacy beliefs, there was a noticeable trend for there to be little if any evidence found for the correlation of environmental factor variables with self-efficacy beliefs. There were also occasional findings where personal factor variables showed no significant effect on principal self-efficacy beliefs. This pattern of findings did not seem to have a clear explanation, nor was it clear why it seemed to be specific to school principals. Tschennen-Moran and Gareis (2005) suggested that one possible cause of this lack of correlation might have been a subtle combination of several environmental factors taken together, such as low socioeconomic status of students when also present with low levels of instructional resources. There were also examples of counterintuitive findings related to principal self-efficacy beliefs and environmental factors.

Chapter 2 outlined how this body of research was applied in the theoretical basis of the study. Given the high expectations placed on principals by the federal *No Child Left Behind Act of 2001* and the state *Florida School Grades Plan*, this study was focused on the degree to which principals believed that the high goals of these programs were

actually attainable. Bandura (1997b) noted that in many cases, higher goals motivated people to work harder to attain them, but only if they remained strongly committed to them over time. Even when assigned to reach goals well beyond attainability, people did attempt to reach them so long as there was no cost in failing to reach them. This distinction about cost was critical in the case of the goals of the *No Child Left Behind Act of 2001*, which entailed serious consequences for principals of Title I schools who fail to meet them (*No Child Left Behind Act of 2001*, 20 U.S.C. § 6316, 2002).

Chapter 2 explained that rather than continue the development of the Principal Sense of Efficacy Scale (Tshannen-Moran & Gareis, 2004) or the Principal Self-Efficacy Scale (Smith et al., 2006), which was important work that remained to be done, the current study proposed to provide a preliminary application of the basic principles of social cognitive theory to a specific set of principal self-efficacy beliefs. In this study, those self-efficacy beliefs under consideration were not the comprehensive span of school leadership behaviors encompassed in the Principal Sense of Efficacy Scale or in the Principal Self-Efficacy Scale, but solely to principal beliefs about the landmark federal and state accountability measures which have changed so much about expectations for schools and principals in the last several years. Chapter 3 will explain the research questions and related hypotheses for this study, including descriptions of the population, the instrumentation, and the analytical methods to be used.

CHAPTER 3: METHODOLOGY

Introduction

Chapter 2 described how social cognitive theory as developed in the professional literature allowed for investigation of principal motivation and leadership behavior using the construct of self-efficacy beliefs. The concept of triadic reciprocity was described, and the theoretical and practical framework of the study was outlined. Chapter 3 will explain the research questions and related hypotheses for this study. The population, instrumentation, and analytical methods will be described.

Research Questions

The purpose of this study was to determine to what degree principals believed the goals of the federal and state accountability measures were actually attainable, and to what degree they believed their efforts actually help achieve these goals. The research questions associated with this problem were related to these seemingly contradictory assessment and accountability systems.

1. To what extent do Florida principals believe that they possess the instructional and leadership efficacy to bring about the 100% proficiency levels required by *No Child Left Behind* (2002)?
2. To what extent do Florida principals believe that they possess the instructional and leadership efficacy necessary to bring about the learning gains necessary to earn a grade of “A” on the *Florida A+ Accountability Plan*?

3. To what extent do personal factors of experience, academic preparation in education, and expectations about these federal and state accountability measures affect these principal self-efficacy beliefs?
4. To what extent do environmental factors of school governance and the socio-economic status of students affect principal self-efficacy beliefs regarding these federal and state accountability measures?

The research hypotheses related to these research questions were as follows:

1. Principals' self-efficacy belief in their ability to lead their faculties to produce learning gains will be positively correlated with their belief in the attainability of federal and state education goals.
2. Principals' self-efficacy belief in their ability to lead their faculties to produce learning gains will be positively correlated with the degree to which they have acted to achieve the goals of each accountability measure.
3. Principals' self-efficacy belief in their ability to lead their faculties to produce learning gains will show a statistically significant contribution ($p < 0.05$) from personal factors, including their years of experience in education, their academic preparation in education, their expectation of the length of time that the federal and state accountability measures will be in effect, and their expectation of consequences resulting from a failure to meet stated goals.
4. Principals' self-efficacy belief in their ability to lead their faculties to produce learning gains will show a statistically significant contribution ($p < 0.05$) from

environmental factors, including higher socio-economic status of students and a higher degree of principal autonomy.

These research hypotheses reflected an expectation that Florida principals were familiar with and accustomed to the requirements of the *Florida A+ Accountability Plan* (2006), and would tend to have higher self-efficacy beliefs about their ability to produce the required results. Given that principals of public charter schools had greater freedom to make major changes in curriculum, instructing, and staffing, these principals would tend to have higher self-efficacy beliefs about their ability to meet the goals of this accountability plan. Given that the 100% proficiency level required by the *No Child Left Behind Act of 2001* (2002) was extraordinarily high, it was expected that principals at all schools would show low self-efficacy beliefs related to these goals.

Population and Sample

This study surveyed principals in Florida public schools, including public charter schools. Any person designated as the official, acting, or interim principal of a school was included in the sample. The sample excluded assistant principals and intern principals.

After considering overall student enrollment and the proportion of all schools in each district that were public charter schools, three Florida schools districts—Brevard, Lee, and Polk—were identified as likely to generate a high number of useful responses for a study of this scale, and representative of much of the state.

Florida school districts varied considerably in population size, demographics, and other potentially relevant factors. Florida school districts were organized by county, which meant they all covered large geographical areas. For districts with large central cities, such as Miami-Dade, this also meant the student populations were very large. Florida school districts with enrollments between 60,000 students and 90,000 students are shown in Table 2.

Table 2

School District Profiles 2006-2007 (Florida Department of Education, 2008b).

District	Total PK-12 enrollment	Charter schools	Total schools	Charter schools as % of all schools
Pasco	64,680	6	98	6.12%
Volusia	65,867	5	97	5.15%
Seminole	66,344	3	82	3.66%
Brevard	74,807	13	130	10.00%
Lee	78,984	13	109	11.93%
Polk	92,809	23	153	15.03%

As shown in Table 2, six school districts had PK-12 enrollment between 60,000 and 90,000 students. These districts were large enough to have had effective school choice programs, school wide Title I programs, and enough public charter schools to have generated a suitable number of survey responses. There were only 7 of Florida's 67 regular school districts that were larger than this, ranging in size from 110,006 students in Pinellas to 353,831 students in Miami-Dade. These largest districts were excluded from consideration because of complicating demographic, political, and financial factors that

could have been present in inner-city schools of large cities. Of these six school districts, Pasco, Volusia, and Seminole were eliminated because of the relatively small number of public charter schools that were active at the time of the study.

The three school districts selected for the sample were likely to be representative of most Florida school districts. One district (Lee) was located on the southwest coast of Florida, one on the southeast coast (Brevard), and one in the center of the state (Polk).

Some factors, however, may limit the comparability of these districts to some others in Florida. Notably, many districts in northern and central Florida tended to be considerably smaller and less urbanized than those in south Florida. Also, a small portion of Florida school districts were extremely large and intensely urbanized. There were concomitant factors in these very small and very large districts that likely limited their comparability, including wide variations in enrollment size, ethnic diversity, local economies, and the proportion of Title I schools and charter schools in these districts.

Research Design

This study was based on the understanding that principal self-efficacy was created within a system of triadic reciprocity. This study investigated how environmental and personal factors may be correlated to those principal self-efficacy beliefs related to public policy, especially those that were related to beliefs about accountability measures.

The environmental factor included the variables of accountability and governance. The accountability variable was determined by whether or not the school received federal funding under Title I, Part A of the *No Child Left Behind Act of 2001*. This federal grant

program provided additional funds to schools in which the majority of students came from low-income households and were eligible to receive a federally-subsidized free or reduced-price lunch.

This was a complex variable, because it was characterized by several concomitant variations: (a) the high percentage of poor children was associated with lower achievement (Jacobsen, et al., 2001); (b) the high percentage of poor children was associated with a higher incidence of out-of-field teaching (Ingersoll & Guber, 1996); (c) the high percentage of poor children was associated with higher teacher mobility (Ingersoll, 1999); and (d) the use of Title I, Part A, funds subjected the school to a federally-defined school improvement process. This school improvement process came into effect whenever the school failed to make adequate yearly progress (AYP) toward its state's approved annual goal.

Adequate yearly progress was determined by assessing student performance for all subgroups against a predetermined goal. For example, Florida's AYP goal for reading was 37% in 2005 (Florida Department of Education, 2005b). For a school to make AYP in reading, at least 37% of each subgroup of students in each grade tested on the FCAT had to meet the proficiency cut score designated as "level 3" (on a five-level scale) or higher.

For accountability purposes, a subgroup was defined as existing in a school if 30 or more students in each category were enrolled and that group also represented at least 15% of the total school population, or if 100 more students in the category were enrolled with no percentage requirement. The subgroups included various racial and ethnic

groups, students with disabilities, limited English proficient students, and economically disadvantaged students. The categories were not exclusive, so a student was counted in as many categories as applied. Combining all of these separate measures (the number of subgroups times the number of grade levels tested times the number of subject areas tested, plus several other measurements unique to each school level) usually produced 30-40 separate criteria for making AYP. If any single criteria was not met (for example, if one subgroup in one grade level performed below the standard in one subject area), then the school failed to make AYP. (U.S. Department of Education, 2008.)

For non-Title I schools, failing to make AYP had no immediate negative consequences in federal law. However, if a Title I school failed to make AYP for two consecutive years, then it entered the four-year school improvement process. During each year of this process, the school had to implement certain practices defined in the *No Child Left Behind* legislation.

For example, during the first year of school improvement, the school had to notify the parents of the students in that school that the school had failed to make AYP and had to offer parents the option of transferring their child to another, higher-performing school. Additional requirements were added in each successive year. After four years, the school improvement process ended. If the school had failed to make AYP by that time, then the school had to be reconstituted, converted to a charter school, or contracted to a private management company (*No Child Left Behind Act of 2001*, 20 U.S.C. § 6316, 2002).

All of these requirements had many effects, including limiting the tenure of the principal. Once a Title I school entered the school improvement process, the principal

had four years to make AYP (for which the requirements increase by 5-6% each year). Principals of schools that failed to meet the steadily-increasing AYP requirements faced termination or transfer (*No Child Left Behind Act of 2001*, 20 U.S.C. § 6316, 2002).

Another key variable in the environmental factor was school governance. For most of the twentieth century, American public schools were led by school principals, who usually reported to school district superintendents, who usually reported to (or was sometimes a member of) school boards made up of citizens.

The advent of charter schools created a new model for governance. In public charter schools, the principal usually reported to a local governing board (or, more rarely, to a superintendent who reported to the local governing board). Although these governance models were similar in structure and operations, the degree of autonomy at each level was far greater in public charters than in traditional public schools. For example, the public charter school principal was free to hire and fire teachers without regard to union-negotiated contracts, and the public charter school governing board was likewise free to establish job qualifications, bonus incentives, and salary perquisites for their principals.

The exchange of greater autonomy for greater results was the driving concept behind the enabling legislation of public charter schools. These two variables contributed to the environmental factor of self-efficacy beliefs, but did not account for the entire factor as shown in Figure 2.

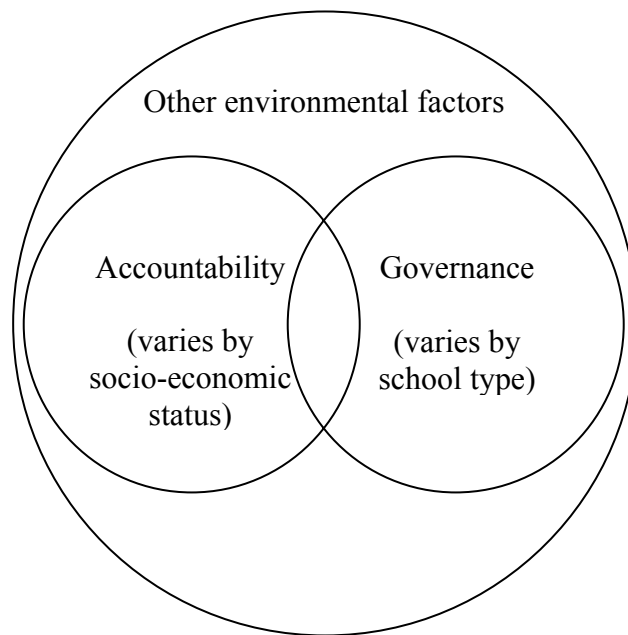


Figure 2: Relationship of Variables Within the Environmental Factor.

Determining exactly what other environmental conditions influence principal self-efficacy belief had been elusive in other studies. Bandura (1986) noted that reciprocity did not indicate symmetry in the strength of the various personal, environmental, and behavioral factors, and that the relative influence of each would vary from individual to individual, and from circumstance to circumstance. Wiig (2004) found no relationship between principal self-efficacy beliefs about professional development and the environmental variables of school level or a school's urban-rural population setting.

To further examine this in terms of accountability measures, the school level variable was included in the current study. This study compared the very specific self-efficacy beliefs of principals regarding the attainability of the goals of the state and

federal accountability measures with the somewhat less-specific self-efficacy belief about being able to effectively perform the instructional job functions of the principal.

Instrumentation

The instrument used to investigate these research questions was a Web-based anonymous questionnaire developed by the researcher. This instrument focused narrowly on self-efficacy beliefs related to the instructional leadership and human resources management dimensions of the principalship related to the *No Child Left Behind Act of 2001* and the *Florida School Grades Plan*. A screen print of the online instrument is attached as Appendix A.

Validity and reliability of this instrument was consistent with other self-efficacy instruments shown to be effective in school contexts, such as the Principal Sense of Efficacy Scale (PSES) developed by Tschannen-Moran and Gareis (2004). To confirm this, reliability of the instrument was calculated of the ten scaled items. Each of the scaled items used a six-point scale. Questions 1-2 and 5-10 asked about the extent of a certain belief or behavior with answer options “none at all,” “a little,” “some,” “quite a bit,” and “a great deal.” Questions 11 and 12 asked about expectancy with answer options “very unlikely,” “somewhat unlikely,” “neither likely nor unlikely,” “somewhat likely,” and “very likely.” These items appear to have good internal consistency, with a Cronbach alpha coefficient reported of 0.7820. Tschannen-Moran and Gareis (2004) reported that their initial Principal Sense of Efficacy Scale had an alpha of 0.77 and their subsequent Principal Sense of Efficacy Scale had an alpha of 0.79. Smith, Guarino, Strom, and

Adkins (2006) reported that their Principal Self-Efficacy Scale of had an alpha of 0.86 for instructional leadership and 0.74 for management practices. McCollum, Kajs, and Minter (2006) reported that their School Administrator Efficacy Survey had alpha coefficients for each of their eight subscales ranging from 0.81 to 0.93.

Although this was a new instrument with items developed for this study, the question format and range of response options were also used in the Principal Sense of Efficacy Scale. Interviews with respondents who participated in a small pilot test of the instrument indicated that respondents understood what was being measured, and found no questions to be unclear or potentially misleading.

The survey items used the commonly-known titles of the accountability plans being studied, and recognizable graphic elements for the separate accountability systems have been included to help principals differentiate similarly-worded questions. This was intended to reduce the risk of responses related to one accountability measure being inadvertently provided for the other. Respondents in the pilot test reported that this assisted them in understanding the questions.

The instrument included questions pertaining to two of the nine Florida Principal Leadership Standards (2005): (1) instructional leadership and (2) human resource management. The instructional leadership question assessed principal beliefs regarding their leadership in curriculum and instruction, and the human resource development question assessed principal beliefs regarding their leadership in effectively staffing their schools. Instructional leadership was selected for study because of its primacy in both accountability systems, and human resource development was selected because of its

central role in the *No Child Left Behind* accountability system. Responses to these questions provided behavioral information about how principals had responded to federal and state accountability measures. These standards had become well-established since their adoption in 1996, and their alignment with the Interstate School Leaders Licensure Consortium standards in 2005 (Sanders & Simpson, 2005).

The study investigated the extent to which personal, behavioral, and environmental factors acted reciprocally in determining self-efficacy. Each of the three factors consisted of multiple variables. As shown in Table 3, this study looked for correlations of self-efficacy beliefs as modified by the environmental factor, which consisted of the variables of accountability, governance, school level, and most recent accountability status.

Table 3

Variables in Environmental Factor

Variable	Measurement
Accountability	Title I designation (yes or no)
Governance	School governance type (district or charter)
School level	Grade spans (elementary or secondary)
Most recent accountability status	School grade (A, B, C, D, F, or NA) AYP determination (yes or no)

School level as an independent variable in principal self-efficacy beliefs had been examined before by Wiig (2004), who found no correlation. This variable was examined in the current study, however, because school staffing seemed to be critical to success in

both the federal and state accountability plan, and because teacher certification needs were differentiated by school level in Florida and so presented potentially different challenges to school principals.

As shown in Table 4, the personal factor was collectively measured through two proxy variables that represented more elaborate areas of personal preferences, traits, and perspectives. Taken together, these variables were likely to have some general influence on the motivation of principals to meet the standards of external accountability measures, although they were less likely to have significant influence when considered separately.

Table 4

Variables in Personal Factor

Variable	Measurement
Experience	Years in education (0-9, 10-19, or 20 and above)
Professional preparation	Education degree (yes or no)
Consequential Expectation	Scaled belief in the likelihood of consequences
Temporal Expectation	Scaled belief that accountability plans will continue

The first such area was that of experience in education, to account for such nuances as personal enthusiasm for teaching and learning, professional perseverance, and personal experiences and perspectives on large scale-reform initiatives. The second area was professional orientation to education and concomitant professional preparation,

indicated by the possession any undergraduate or graduate degree from a school or college of education.

The two remaining variables, however, were the ones that were most salient to this proposed study, since they were the ones that arguably can be modified by public policy, training, cognitive appeals, or other means available. The two remaining variables were essentially professional judgments or opinions: the consequential expectation was the degree to which the principal believed that the negative consequences of failing to meet accountability standards would actually be applied, and the temporal expectation was the length of time that the principal believed that the accountability measures would be in force.

The final variable in the reciprocity model was behavioral, and focused on instructional leadership behavior and human resource management behavior. This information was indicated by the degree to which the principal had made changes in the school's instructional staffing and the school's curriculum in order to meet the goals of each accountability measure as shown in Table 5.

Table 5

Variables in Behavioral Factor

Variable	Measurement
Instructional leadership	Degree of change in curriculum or instruction
Human resource management	Degree of change in instructional staffing

Given the time that these accountability measures had been in place (nine years for the *Florida School Grades Plan* and seven years for the *No Child Left Behind Act of 2001*), it seemed likely that nearly every principal in Florida had made some change in staffing or curriculum at some point in the past and so it was the principals' assessment of the magnitude of such actions that was used to determine the degree to which these plans prompted significant behavior.

Data Collection Procedures

This study surveyed principals of all public schools and all public charter schools within three similar Florida school districts. After obtaining appropriate authorization from each school district's research review committee and from the University of Central Florida Institutional Review Board, each principal in the three selected districts was sent a recruitment letter via e-mail from the investigator with instructions on how to access the Web survey. The recruitment letter explained the nature and purpose of the survey, and explained that the survey itself was anonymous and voluntary. This invitation also explained that the e-mail addresses were obtained from publicly available sources.

The recruitment letter also included a brief biography and contact information about the investigator. The Web survey included an informed consent page that explained the research project, provided a brief biography of the researcher, explained how to navigate the survey, and how long the survey would be available.

Anonymity of respondents was carefully preserved. The survey instrument only asked for general information about the school and the respondent. It was not possible to

determine, even from a completed survey, the name of the respondent who completed it or at what school or in what school district the respondent serves. This effort toward anonymity was fully explained to respondents in an effort to promote frank and honest responses.

Survey responses were accepted through the date indicated on the letter. A reminder message was sent via e-mail to all potential respondents just prior to the end of the survey period. After the survey period ended, the results were downloaded from the commercial survey vendor's Web site, separated from Internet Protocol (IP) addresses as a final assurance of true anonymity, and then transferred into SPSS for analysis.

Analytic And Statistical Methods

This study used quantitative correlation and regression analysis. Descriptive statistics were used to examine self-efficacy beliefs of principals, with personal variables of years of experience in education, and whether or not any degree in education was held; and with school variables to include Title I designation, whether the school was a traditional school or a charter school, the most recent school grade under the *Florida School Grades Plan*, and the most recent determination of adequate yearly progress under the *No Child Left Behind Act of 2001*.

Using SPSS, statistical analyses were then performed on the collected data to determine what relationships may exist among and between the identified variables. To establish the general self-efficacy beliefs about the influence of principals on student achievement, descriptive statistics were used to assess responses to survey question 1,

regarding beliefs about any principal's leadership being able to improve student achievement, and survey question 2, regarding the respondents' beliefs about their own ability to do so.

To determine the extent to which Florida principals believed they possessed the instructional and leadership efficacy related to each accountability measure, a paired samples t-test was used to determine any statistically significant mean difference in scores from survey question 3, regarding the *No Child Left Behind Act of 2001*, and survey question 4, regarding the *Florida School Grades Plan*. A Pearson product-moment analysis was used to test for any correlation between self-efficacy beliefs and degree to which principals believe the goals of each accountability plan to be attainable as indicated by responses to survey questions 5 and 7. A Pearson product-moment analysis was used to test for any correlation between self-efficacy beliefs and the degree to which principals had acted to achieve the goals of each accountability plan as indicated by responses to survey questions 6 and 8.

To determine the extent to which personal factor variables of experience, academic preparation, and expectations about the accountability plans affected self-efficacy beliefs, multiple regression analysis was used. In this analysis, self-efficacy belief in each accountability plan was analyzed as the dependent variable and the personal factor items in questions 9-14 as independent variables. The R square value was used to determine the portion of the variance accounted for by the personal factor variables.

Multiple regression was used to determine the extent to which the environmental variables of accountability, governance, and most recent student performance affect self-efficacy beliefs related to the accountability plans. In this analysis, self-efficacy belief in each accountability plan was analyzed as the dependent variable and the environmental factor items in questions 15-19 as independent variables. The R square value was used to determine the portion of the variance accounted for by the environmental factor variables.

Summary

Chapter 3 described the research design and methodology used in the study. The purpose of this study was to determine to what degree principals believed the goals of the federal and state accountability measures were actually attainable, and to what degree they believed their efforts actually help achieve these goals. Since certain environmental variables related to school governance and Title I status were of interest, the study included a survey of all currently assigned principals in three representative Florida public school districts, including principals of public charter schools.

The survey itself was a new instrument developed for this study. Most of the non-demographic survey questions used the response scale that proved useful in the Principal Sense of Efficacy Scale (PSES) developed by Tschannen-Moran and Gareis (2004), as described in Chapter 2. The survey questions included items that provided information about variables in each of the research questions and related hypotheses.

The survey items used the commonly-known titles of the accountability plans being studied, and recognizable graphic elements for the separate accountability systems

have been included to help principals differentiate similar questions. This was intended to reduce the risk of responses related to one accountability measure being inadvertently provided for the other.

The survey included instructional leadership question to assess principal beliefs regarding their leadership in curriculum and instruction, and their leadership in effectively staffing their schools. Responses to these questions provided behavioral information about how principals had already purposefully responded to the federal and state accountability measures.

The survey allowed for the investigation of the extent to which personal, behavioral, and environmental factors act reciprocally in determining self-efficacy, as predicted by social cognitive theory. Each of the three factors consisted of multiple variables. This study looked for correlations of self-efficacy beliefs as modified by the environmental factor, which consisted of the variables of accountability (as indicated by the school's Title I status) and governance (as indicated by whether or not the school was a charter school or a district-operated school). The study also looked for correlations of self-efficacy belief as modified by the personal factor variables of experience in education, professional preparation for education, and personal expectations about whether or not the principals believed they would be held personally accountable for each plan, and whether or not they expected the plans to endure for some time to come.

After securing appropriate permissions from each school district and the University of Central Florida Internal Review Board, a recruitment letter was sent to the public e-mail addresses of all school principals in the three selected school districts. The

Web survey was administered from Monday, May 4, 2009 through Friday, May 15, 2009. On Saturday, May 16, 2009, the survey was closed and the data was downloaded for analysis and hypothesis testing. These analytic procedures and results will be described in Chapter 4.

CHAPTER 4: DATA ANALYSIS

Introduction

As described in Chapter 3, the data from the online principal survey were collected using a commercial Web-based survey provider. During the 12-day survey period, 31.11 % ($n = 112$) of the recruited principals ($n = 360$) responded to the survey. After the survey period ended, the data were downloaded from the Web site in a Microsoft Excel file format. This original data file was then password-protected and marked as read-only, preventing any inadvertent changes to the original data. A working copy of this file was created, and the IP addresses of the respondents were stripped out of the file as had been indicated in the informed consent statement.

A new worksheet was created in the working copy to store codebook notes for the creation of an SPSS data file. The data were then imported into SPSS for analysis. Recoding of some variables was conducted to facilitate analysis, as noted later in this chapter. As described in chapter 3, analytical tests were conducted on the data to investigate the research questions and test the related hypotheses. Chapter 4 will describe the results of that analysis.

Population and Sample Characteristic

Of the 112 principals who responded, 98 or 87.50% of the principals were working in traditional district-operated schools, and 14 or 12.50% were working in charter schools. These data are compared with the state as a whole in Table 6.

Table 6

Comparison of Charter School Percentage (Florida Department of Education, 2008c).

	Total Schools	Charter Schools	Percentage Charter
Sample	112	14	12.50%
Florida	4,197	364	8.67%

Of the principals responding, 43 or 38.39% led schools receiving federal ESEA Title I, Part A grant funds. This designation indicates that these schools receive additional federal funds for instruction, were subject to a higher level of sanctions from the federal accountability plan, and have a relatively higher portion of students from lower-income families. These data are compared with the state as a whole in Table 7.

Table 7

Comparison of Title I School Percentage (Florida Department of Education, 2008d).

	Total Schools	Title I Schools	Percentage Title I
Sample	112	43	38.39%
Florida ¹	4,197	1,435	28.87%

A large majority of the principals responding were principals of elementary schools, with 64 or 57.10% indicating this was their school level. There were 22 middle school principals responding, representing 19.60% of the participants. Another 12 or 11.60% of the principals led high schools. Another 12 or 10.70% of the principals led

combination schools (such as schools including both elementary and middle school grades). A single principal, representing 0.9% of the respondents, led a school primarily intended for adults. These data are compared with the state as a whole in Table 8.

Table 8

Comparison of School Levels (Florida Department of Education, 2008d).

	Elementary	Middle	High	Combination	Adult
Sample	57.10%	19.60%	11.60%	10.70%	0.90%
Florida	45.87%	14.20%	20.99%	14.44%	4.50%

Two items of additional information about each principal were also collected for purposes of creating a personal factor for hypothesis testing: the total number of years of experience in education of the respondent, and whether or not the respondent was professional prepared in education, indicated by a proxy signifier of possession of a degree from a school or college of education.

The resulting data for experience revealed a distribution skewed toward higher experience as one might expect for those holding the highest leadership position in a school. These data (including those from principals of district schools and charter schools) are summarized in Table 9.

Table 9

Principals' Experience in Education

Years in education	0-9	10-19	20-29	30 or more
Frequency	0	28	31	53
Percentage	0.0%	25.0%	27.7%	47.3%

However, the results for professional preparation showed that 97.3% of all respondents held professional education degrees, leaving only three cases in the other category. Based on this result, this variable has too few cases to constitute a separate group for analytical purposes. These data (including those from principals of district schools and charter schools) are summarized in Table 10

Table 10

Principals' Professional Preparation in Education

Held degree from a school or college of education	Yes	No
Frequency	109	3
Percentage	93.7%	2.7%

Analysis of Response Rates

A total of 360 potential participants in three school districts were sent e-mail invitations. During the 12-day survey period, the survey Web page was viewed 187

times, resulting in 127 cases where the survey was actually initiated, as indicated by the participant indicating acceptance of the informed consent provisions and asserting that they wished to begin responding to the survey questions.

During the 12-day survey period, a total of 112 participants completed some or all parts of the survey, for a return rate of 31.11%. The Web survey service determined that each of these survey sessions was from a unique computer, with no repeat sessions. Of those who actually accessed the survey, 112 responded to some or all of the questions for a completion rate of 88.19%. The average time taken to complete the survey was 8 minutes, somewhat less than the 10 minutes that had been estimated.

Analysis of General Leadership Self-efficacy Beliefs

The leadership self-efficacy beliefs of principals were assessed from responses to survey question 1 and survey question 2. Of the 112 principals responding, 86 (76.80%) reported their belief that their leadership has “quite a bit” or “a great deal” of effect in leading their schools to attaining the 100% proficiency requirements of *No Child Left Behind* by the year 2014. The mean score was 4.01 on a 5-point scale, with a standard deviation of 1.12.

Of 111 who responded, 99 (86.50%) reported the same level of belief in their leadership effect in attaining a school grade of “A” under the *Florida School Grades Plan*. The mean score was 4.4 on a 5-point scale, with a standard deviation of 0.80.

Analysis of Specific Leadership Self-efficacy Beliefs and Attainability of Goals

Specific principal leadership self-efficacy beliefs regarding the federal plan goals were assessed from responses to survey question 3, which asked whether or not the principals believed that the 100% proficiency goal of the *No Child Left Behind Act of 2001* was attainable in their school by 2010. Of the 111 principals responding, 23 (20.70%) reported that they believed this goal was attainable.

Specific principal leadership self-efficacy beliefs for the state plan goal were assessed from responses to survey question 4, which asked whether or not the principal believed that their school could earn a grade of “A” on the *Florida School Grades Plan*. Of the 111 principals responding, 93 (83.80%) reported that they believed this goal was attainable.

A paired samples t-test was used to determine any statistically significant mean difference in scores between principals’ beliefs in the attainability of the goals of the federal plan and of the state plan. There was a statistically significant difference in the mean score of principals who believed the federal goal was attainable ($M = 1.79$, $SD = 0.407$) to the mean score of those who believed the state goal was attainable ($M = 1.16$, $SD = 0.370$), $t(110) = 13.704$, $p < 0.01$ (two-tailed). The mean difference in belief of goal attainability was 0.63 with a 95% confidence interval ranging from 0.54 to 0.72. The eta squared statistic (0.94) indicated a large effect size.

A Pearson product- moment analysis was used to test for correlation between principals’ self-efficacy beliefs in their ability to lead their schools to learning gains for the *No Child Left Behind Act of 2001* and their belief in the attainability of those goals.

The self-efficacy belief reported for *No Child Left Behind Act Of 2001* in survey question 1 was compared to the belief in the attainability of the federal goals in question 3. The scoring direction for each of these two variables was reversed from the other, so the signs of test results were also reversed. There was a small positive correlation between belief in the attainability of the federal goals and principal self-efficacy belief in their ability to lead their schools toward achieving those goals, $r = .254, n = 111, p < .01$.

A Pearson product-moment analysis was used to test for correlation between principals' self-efficacy beliefs in their ability to lead their schools to learning gains for the *Florida School Grades Plan* and their belief in the attainability of the *Florida School Grades Plan* goals. The self-efficacy belief reported for the *Florida School Grades Plan* in survey question 2 was compared to the belief in the *Florida School Grades Plan* goal attainability in question 4. The scoring direction for each these two variables was reversed from the other, so the signs of test results were also reversed.

There was a small positive correlation between belief in the attainability of the *Florida School Grades Plan* goals and principal self-efficacy belief in their ability to lead their schools toward achieving those goals, $r = .285, n = 111, p < .01$. These results are summarized in Table 11.

Table 11

Relationship of Belief in Goal Attainability With Self-Efficacy Belief

	<i>No Child Left Behind</i>	<i>Florida School Grades</i>
Pearson Correlation	.254*	.285*
Sig. (2-tailed)	.007	.002
<i>n</i>	111	111

* Correlation is significant at the 0.01 level (2-tailed).

Correlation of Self-Efficacy Belief with Leadership Behaviors

A Pearson product-moment analysis was used to test for correlation between principals' self-efficacy beliefs in their ability lead their schools to learning gains and the degree to which they purposefully acted to achieve the goals of each accountability plans. Purposeful principal leadership actions in pursuit of *No Child Left Behind* goals were reported in two categories: changes in curriculum or instructional practices, and changes in staffing. The self-efficacy beliefs reported for each accountability plan in survey question 1 and survey question 2 were compared to the leadership behaviors reported in survey questions 5 through 8.

There was a small positive correlation between each set of variables. Principal self-efficacy beliefs were positively correlated with purposeful leadership action in making a change in the school's curriculum or instructional practices to achieve the *No Child Left Behind* goals, $r = .253$, $n = 112$, $p < 0.01$, with high levels of self-efficacy belief associated with high levels of leadership action.

Principal self-efficacy beliefs were positively correlated with purposeful leadership action in making a change in the school's staffing to achieve the *No Child Left Behind* goals, $r = .159$, $n = 112$, $p < 0.01$, with high levels of self-efficacy belief associated with high levels of leadership action. The strength of the correlation for staffing changes was much lower than that for curriculum or instructional changes. These data are reported in Table 12

Table 12

Relationship of Self-Efficacy Belief to Action Toward Federal Goal

	<u>Leadership Action Toward NCLB Goal</u>	
	Curriculum/Instruction	Staffing
NCLB Self-efficacy Belief		
Pearson Correlation	.253*	.159
Sig. (2-tailed)	.007	.094
<i>n</i>	112	112

* Correlation is significant at the 0.01 level (2-tailed).

The correlation pattern for the *Florida School Grades Plan* was comparable. Principal self-efficacy beliefs were positively correlated with purposeful leadership action in making a change in the school's curriculum or instructional practices to achieve the *Florida School Grades* goals, $r = .206$, $n = 111$, $p < 0.05$, with high levels of self-efficacy belief associated with high levels of leadership action. Principal self-efficacy beliefs were positively correlated with purposeful leadership action in making a change in

the school's staffing to achieve the *Florida School Grades* goals, $r = .186$, $n = 111$, $p = 0.05$, with high levels of self-efficacy belief associated with high levels of leadership action. The strength of the correlation for staffing changes related to *Florida School Grades* goals was slightly lower than that for curriculum or instructional changes. These data are reported in Table 13.

Table 13

Relationship of Self-Efficacy Belief to Action Toward State Goal

	<u>Leadership Action Toward Goal</u>	
	Curriculum/Instruction	Staffing
School Grades Self-efficacy Belief		
Pearson Correlation	.206*	.186
Sig. (2-tailed)	.030	.050
<i>n</i>	111	111

* Correlation is significant at the 0.05 level (2-tailed).

Multiple Regression Analysis of Contribution of Personal Factors

Multiple regression analysis was used to investigate the extent to which personal factor variables of experience, academic preparation, and expectations about the accountability plans affected self-efficacy beliefs. In this analysis, self-efficacy belief in each accountability plan was analyzed as the dependent variable and the personal factor items in questions 9-14 as independent variables. The variable of school level was recoded to create a dichotomous independent variable for analysis. In the recording,

responses for “elementary” were not recoded at all, responses for “middle/junior high school” and “senior high school” were combined as “secondary,” and the remaining responses of “combination school” or “adult” school were removed, leaving 90 cases for analysis. Preliminary analyses indicated no reason to challenge assumptions of normality, homoscedasticity, linearity, and multicollinearity. The data for the personal variables are summarized in Table 10.

In the case of *No Child Left Behind*, the total variance in the dependent variable of principal self-efficacy belief explained by the personal factor model was 24.3%, $F(4, 105) = 8.437, p < .01$. The sole significant component factor with the greatest unique contribution to the variance was that of temporal expectation related to *No Child Left Behind*, standardized beta = 0.426, $p < .01$. The variable of expectation of accountability related to *No Child Left Behind* had a standardized beta of 0.143, but the p value was 0.109, so this factor may not make a significant independent contribution to variability.

The remaining two variables in the personal factor had no significant effect. For the variable of experience in education, the standardized beta was -0.101, $p = .239$, and for the variable of professional preparation in education, the standardized beta was .057, $p = 0.511$.

In the case of the *Florida School Grades Plan*, the total variance in the dependent variable of self-efficacy belief explained by the personal factor was 10.1%, $F(4, 106) = 2.969, p < .05$. As before, the sole significant component factor with the greatest unique contribution to the variance was that of temporal expectation related to the *Florida School Grades Plan*, standardized beta = 0.228, $p < .05$. The variable of expectation of

accountability related to the *Florida School Grades Plan* had a standardized beta of 0.143, but the p value was 0.153, so this may not make a significant independent contribution to variability.

As before, the remaining two variables in the personal factor had no significant effect. For the variable of experience in education, the standardized beta was -0.002, $p = -0.986$, and for the variable of professional preparation in education, the standardized beta was -0.086, $p = 0.352$. These results are summarized in Table 14

Table 14

Contributions of Personal Variables to Self-Efficacy Belief

Factor variable	<u><i>No Child Left Behind</i></u>		<u><i>Florida School Grades</i></u>	
	S. Beta	Sig.	S. Beta	Sig.
Temporal expectation	.426	.000	.228	.024
Accountability expectation	.143	.109	.143	.153
Professional preparation	.057	.511	-.086	.352
Experience in education	-.101	.239	-.002	.986

Multiple Regression Analysis of Contribution of Environmental Factors

Multiple regression analysis was also used to investigate the extent to which environmental variables of accountability, governance, and most recent student performance affected self-efficacy belief in each accountability plan. In this analysis, self-efficacy belief was analyzed as the dependent variable and the environmental factor items in questions 15-19 as independent variables. Preliminary analyses indicated no reason to challenge assumptions of homoscedasticity, linearity, and multicollinearity. However, the distribution was not completely normal given the predominantly categorical nature of the environmental variables. The data for the environmental variables are summarized in Table 11.

In the case of *No Child Left Behind*, the total variance in the dependent variable of principal self-efficacy belief explained by the environmental factor model was only 1.2%, $F(4, 90) = 0.284$, $p = 0.862$. This lack of overall significance was seen in each component factor with no significant contributions to the variance. The most recent school determination of AYP was not a significant variable, standardized beta = 0.023, $p = 0.852$.

None of the other environmental variables related to *No Child Left Behind* were significant. For Title I status, the standardized beta was 0.38, $p = 0.755$, for school type, the standardized beta was -0.113, $p = .316$, and for school level, the standardized beta was -.022, $p = .853$.

In the case of the *Florida School Grades Plan*, the total variance in the dependent variable of self-efficacy belief explained by the environmental factor was only 4.5%, F

(4, 106) = 1.256, $p = .292$. As before, this lack of overall significance was seen in each component factor with no significant contributions to the variance. The most recent school grade was not a significant variable, standardized beta = 0.088, $p = 0.374$.

None of the other environmental variables related to the *Florida School Grades Plan* were significant. For Title I status, the standardized beta was -0.47, $p = 0.647$, for school type, the standardized beta was -0.181, $p = .064$, and for school level, the standardized beta was -.048, $p = 0.623$. These results are summarized in Table 15

Table 15

Contributions of Environmental Variables to Self-Efficacy Belief

Factor variable	<u><i>No Child Left Behind</i></u>		<u><i>Florida School Grades</i></u>	
	S. Beta	Sig.	S. Beta	Sig.
AYP status or school grade	.023	.852	.088	.374
Title I status	.038	.755	-.047	.647
School type	-.113	.316	-.181	.064
School level	-.022	.853	-0.48	.623

Summary

Chapter 4 described the results of the analysis of the principal survey data. The key findings included:

1. The majority of principals (76.80%) reported their belief that their leadership has “quite a bit” or “a great deal” of effect in leading their

schools to attaining the 100% proficiency requirements of the *No Child Left Behind Act of 2001* by the year 2014.

2. The somewhat larger majority of principals (86.50%) reported the same level of belief in their leadership effect in attaining a school grade of “A” under the *Florida School Grades Plan*.
3. A minority of principals (20.70%) believed that the 100% proficiency goal of the *No Child Left Behind Act of 2001* was attainable in their school by 2010 as required by federal law.
4. A majority of principals (83.80%) believed that their school could earn a grade of “A” under the *Florida School Grades Plan*.
5. The difference between those who believe in the attainability of the federal plan versus the state plan was large and statistically significant, $t(110) = 13.704, p < 0.01$ (two-tailed).
6. There was a small, but statistically significant correlation, between belief in the attainability of the goal and the leadership behaviors of principals in actually pursuing the goal for both the *No Child Left Behind Act of 2001* ($r = .159, n = 112, p < 0.01$) and for the *Florida School Grades Plan* ($r = .206, n = 111, p < 0.05$).
7. The personal factor accounted for a modest portion (24.3%) of the variance in self-efficacy belief. In this study, the personal factor included temporal expectation, accountability expectation, professional preparation in education, and experience in education.

8. The environment factor was not found to make a significant contribution to variance in self-efficacy belief. In this study, the environmental factor included school type, school Title I status, school level, and the most recent school grade or AYP determination.

Chapter 5 will include conclusions related to these finding, including a discussion of the theoretical and practical implications of the study. Hypothesis tests will be reviewed, and suggestions for future research will be discussed.

CHAPTER 5: CONCLUSIONS

Introduction

This study was conducted to investigate principal self-efficacy beliefs related to two historic school accountability measures affecting public school in Florida: the federal *No Child Left Behind Act of 2001* and the *Florida School Grades Plan*. Chapter 1 described how widespread expectation of accountability for results and a growing tolerance for privatization of public services affected schooling the U.S., most notably in the rise of these federal and state accountability measures for schools, and in the rapid proliferation of charter schools.

Under the leadership of Governor John E. “Jeb” Bush at the state level and of President George W. Bush at the federal level, two new school accountability measures redefined the mission and assessment of Florida public schools. The *Florida School Grades Plan* and the *No Child Left Behind Act of 2001* changed the work and expectations of school principals. These two leaders also promoted the creation of charter schools, thereby creating a privatized market-driven approach to creating, funding, governing, and assessing schools. Regarded as fundamental and sweeping changes, these new approaches to public schooling put considerable pressure on school principals to lead their schools to unprecedented levels of student achievement. Understanding this profoundly-altered educational environment also required understanding the motivation and leadership behavior of principals who worked within it.

Chapter 2 provided a summary of review of the literature, beginning with a discussion of the construct of self-efficacy in social cognitive theory. The work of Albert

Bandura predominantly shaped the current understanding of this construct, and his concept of triadic reciprocity was discussed. In this study, the three elements in the triadic model were: (a) self-efficacy beliefs related to the federal and state accountability plans, (b) personal factors related to each school principal, and (c) environmental factors related to each school setting. Literature describing the nature and relationships of teacher and principal self-efficacy was reviewed. It was noted that while teacher self-efficacy beliefs have been studied frequently, there had been far less study regarding principal self-efficacy beliefs. Prior research regarding principal self-efficacy beliefs was summarized, including the development of an instrument known as the Principal Sense of Efficacy Scale (Tschannen-Moran & Gareis, 2004). Relevant patterns and trends in the literature were also discussed. Chapter 2 concluded with a discussion of the theoretical and practical dimensions of the study.

Review of Research Questions

Chapter 3 included a description of the methodology for the study, including a discussion of how three school districts were selected as study sites. The four key research questions were defined, along with their related hypotheses. The purpose of this study was to determine to what degree principals believed the goals of the federal and state accountability measures were actually attainable, and to what degree they believed their efforts actually help achieve these goals. The four research questions associated with this problem were related to these quite different assessment and accountability systems.

1. To what extent do Florida principals believe that they possess the instructional and leadership efficacy to bring about the 100% proficiency levels required by *No Child Left Behind*?
2. To what extent do Florida principals believe that they possess the instructional and leadership efficacy necessary to bring about the learning gains necessary to earn a grade of “A” on the *Florida A+ Accountability Plan*?
3. To what extent do personal factors of experience, academic preparation in education, and expectations about these federal and state accountability measures affect these principal self-efficacy beliefs?
4. To what extent do environmental factors of school governance and the socio-economic status of students affect principal self-efficacy beliefs regarding these federal and state accountability measures?

The research hypotheses related to these research questions were as follows:

1. Principals’ self-efficacy belief in their ability to lead their faculties to produce learning gains will be positively correlated with their belief in the attainability of federal and state education goals.
2. Principals’ self-efficacy belief in their ability to lead their faculties to produce learning gains will be positively correlated with the degree to which they have acted to achieve the goals of each accountability measure.
3. Principals’ self-efficacy belief in their ability to lead their faculties to produce learning gains will show a statistically significant contribution (p

< 0.05) from personal factors, including their years of experience in education, their academic preparation in education, their expectation of the length of time that the federal and state accountability measures will be in effect, and their expectation of consequences resulting from a failure to meet stated goals.

4. Principals' self-efficacy belief in their ability to lead their faculties to produce learning gains will show a statistically significant contribution ($p < 0.05$) from environmental factors, including higher socio-economic status of students and a higher degree of principal autonomy.

Review of Research Methods

Chapter 3 included a description of the research design and methodology used in the study, which involved the use of a Web-based survey of school principals. Since certain environmental variables related to school governance and Title I status were of interest, the study included a survey of all currently assigned principals in three representative Florida public school districts, including principals of public charter schools.

The survey itself was a new instrument developed for this study. The survey is provided in Appendix A. Most of the non-demographic survey questions used the response scale that proved useful in the Principal Sense of Efficacy Scale (PSES) developed by Tschannen-Moran and Gareis (2004), as described in Chapter 2. The survey

questions included items that provided variable for each of the research questions and related hypotheses.

The survey items used the commonly-known titles of the accountability plans being studied, and recognizable graphic elements for the separate accountability systems were included to help principals differentiate similarly-worded questions. This was intended to reduce the risk of responses related to one accountability measure being inadvertently provided for the other.

Questions regarding instructional leadership were also included to assess principal beliefs regarding their leadership in curriculum and instruction, and their leadership in effectively staffing their schools. Responses to these questions provided behavioral information about how principals have already purposefully responded to the federal and state accountability measures.

The survey allowed for the investigation of the extent to which personal, behavioral, and environmental factors act reciprocally in determining self-efficacy, as predicted by social cognitive theory. Each of the three factors consisted of multiple variables. This study examined correlations of self-efficacy beliefs as modified by the environmental factor, which consisted of the variables of accountability (indicated by the school's Title I status) and governance (indicated by whether or not the school was a charter school or a district-operated school). The study also determined correlations of self-efficacy belief as modified by the personal factor variables of experience in education, professional preparation for education, and personal expectations about

whether or not the principals believed they would be held personally accountable for each plan, and whether or not they expected the plans to endure for some time to come.

After securing appropriate permissions from each school district and the University of Central Florida Internal Review Board, a recruitment letter was sent to the public e-mail addresses of all school principals in the three selected school districts. The Web survey was open for responses for a 12-day period encompassing two work weeks in May 2009.

Limitations of the Current Study

This study was intended to yield potentially meaningful information about the relationship of principal self-efficacy beliefs to very specific principal self-efficacy beliefs regarding the implementation of federal and state accountability plans, and about what relationship might have existed between these beliefs and various personal, behavioral, and environmental factors that contribute to self-efficacy belief formation.

Within that context, this was not a causal study, but instead descriptive and correlational. Other delimitations were established to improve data interpretation as follows:

1. This study included only public schools (including public charter schools) in Florida. Non-public schools (including private schools, parochial schools, and other religious schools) were not included in the study. For Research Questions 3 and 4, which concerned the effects of personal and environmental variables on principal self-efficacy beliefs, the study also

excluded data from principals of schools intended primarily for adults and schools that combined elementary and secondary grade levels.

2. The study did not differentiate between those schools that received ESEA Title I, Part A grant funds on a targeted selection model and those that received funds on a school-wide model. Schools using either of these models and receiving ESEA Title I, Part A were designated as Title I schools for this study, and this status was reported by the principals themselves.

Limitations included:

1. The truthfulness, candor, and common understanding of the survey participants regarding the accountability measures being investigated was assumed but not verified. Although respondents were advised that the survey was anonymous, it was possible that some respondents may have felt uncomfortable expressing beliefs about the potential academic achievement of student subgroups, or other beliefs related to these accountability measures.
2. The moderate response rate could have reduced the degree to which the sample was representative of the population.
3. The study assumed the familiarity of respondents with the use of a Web-based survey, and assumed their ability to access the survey on the World Wide Web. It was possible that an Internet service provider for a charter school might have employed a Web filter that could have prevented

potential respondents from accessing the survey, thereby introducing sample error. Access to the Web survey was verified for principals using the networks of the three school districts, but charter school principals may or may not have used these networks depending on district or corporate policy, and on personal preference. However, no one contacted the researcher during the study to report any access difficulty.

Conclusions Regarding Principal Self-Efficacy Beliefs

Research Question 1 concerned the extent to which Florida principals believed that they possessed the instructional and leadership efficacy to bring about the 100% proficiency levels required by the *No Child Left Behind Act of 2001*. Most principals (76.8%) indicated that they believe their leadership has “quite a bit” or “a great deal” of effect in leading their schools toward the federal education goals.

Research Question 2 concerned the extent to which Florida principals believed that they possessed the instructional and leadership efficacy necessary to bring about the learning gains necessary to earn a grade of “A” on the *Florida School Grades Plan*. A majority of principals, (86.5%) indicated that they believed their leadership has “quite a bit” or “a great deal” of effect in leading their schools toward the state education goals.

These results suggest that, in general, principals have a high self-efficacy belief in producing learning gains as defined by both the federal and state accountability system. By margin of 9.6%, however, more principals believed this about the *Florida School Grades Plan* than did about the federal *No Child Left Behind Act of 2001*. This difference was statistically significant ($p < 0.01$) with a large effect size (eta squared = 0.94).

A large difference was also found in principal beliefs about the actual attainability of the goals of the federal and state accountability measures. While 83.8% of principals believed it was possible for their school to earn an “A” under the *Florida School Grades Plan*, only 20.7% believed that it was possible for their school to achieve 100% grade level proficiency in mathematics and reading by 2014, as required by the *No Child Left Behind Act of 2001*. The marginal difference in belief in goal attainability for these two accountability measures was 63.1%. In other words, principal belief in the attainability of the *No Child Left Behind Act of 2001* goal was so low that belief the federal goal was impossible (79.3%) was nearly as high as the belief that the state goal was possible (83.8%).

In short, nearly all principals believed that the goals of the state plan were attainable, but very few principals believed that the goals of the federal plan were attainable. This very large difference in belief should have resulted in related differences in motivation (or “force” in Vroom’s terminology) or in self-efficacy (using Bandura’s principle of triadic reciprocity). Since most principals believed that the goals of the *Florida School Grades Plan* were attainable, then they should have been expected to have a higher sense of self-efficacy in actually being able to achieve them. Conversely, since most principals did not believe the goals of the *No Child Left Behind Act of 2001* were attainable, then they should be expected to have a lower sense of self-efficacy in being able to achieve them.

This prediction from social cognitive theory was supported by the data. The first hypothesis related these research questions was that principals’ self-efficacy belief in

their ability to lead their faculties to produce learning gains would be positively correlated with their belief in the attainability of federal and state education goals. The results supported this hypothesis, with higher levels of self-efficacy for each accountability plan being positively correlated with belief in the attainability of each plan's goals. This correlation was slightly stronger in the case of the *Florida School Grades Plan* ($r = .285$) than for the *No Child Left Behind Act of 2001* ($r = .254$). Each correlation was statistically significant at the 0.01 level, two-tailed. Based on these results, the null hypothesis could be rejected. These results were consistent with the prediction from social cognitive theory that belief in goal attainability was related to self-efficacy belief related to that goal.

The second hypothesis related to these research questions was that principals' self-efficacy belief in their ability to lead their faculties to produce learning gains would be positively correlated with the degree to which they have acted to achieve the goals of each accountability measure. The results supported this hypothesis, with higher levels of self-efficacy for each accountability plan being positively correlated with purposeful leadership actions in pursuit of those goals. This correlation was somewhat stronger for the *No Child Left Behind Act of 2001* ($r = .253, p < .01$) than for the *Florida School Grades Plan* ($r = .206, p < .05$). Each correlation was statistically significant at their respective levels, two-tailed. Based on these results, the null hypothesis could be rejected. These results were consistent with the prediction from social cognitive theory that belief in goal attainability was related to actions toward goal attainment.

Conclusions Regarding Personal Factor Effect

Research Question 3 concerned the extent to which the personal factors of experience, academic preparation in education, and expectations about these federal and state accountability measures affected principal self-efficacy beliefs. In the case of the *No Child Left Behind Act of 2001*, the personal factor accounted for 24.3% of the variance in self-efficacy beliefs, $p < .0001$. In the case of the *Florida School Grades Plan*, the personal factor accounted for 10.1% of the variance in self-efficacy beliefs, $p < .05$. Of the four personal variables examined, only the temporal expectation for each accountability plan could be determined to have made an independent contribution to the variance in principal self-efficacy beliefs. In this study, the temporal expectation described the extent to which principals believed each accountability plan would continue to be in effect in the future.

The hypothesis related to this research question was that principals' self-efficacy belief in their ability to lead their faculties to produce learning gains would show a statistically significant contribution ($p < 0.05$) from personal factors, including their years of experience in education, their academic preparation in education, their expectation of the length of time that the federal and state accountability measures will be in effect, and their expectation of consequences resulting from a failure to meet stated goals.

The results suggested that the personal factor did make a small contribution in the variable of temporal expectation, and no significant contribution at all for the other variables. Although the personal factor as a whole did account for some of the variance in self-efficacy beliefs (25.3% for the *No Child Left Behind Act of 2001*, and 10.1% for the

Florida School Grades Plan), the individual component variables appeared to account for very little independently, suggesting that this factor was not fully described by these four variables alone. Since the r squared value and significance level for the personal factor met the hypothetical test limits, the null hypothesis could be rejected, although little else about this factor could be determined. The data were consistent with the prediction from social cognitive theory that personal factors affect self-efficacy belief, but the data did not demonstrate individual effects of the component personal factor variables.

The single variable of professional preparation for education, for example, was clearly insufficient to explain what appeared to be a more nuanced state of affairs. Professional preparation in education was indicated in this study by the respondent indicating that they held a degree from a school or college of education. The data revealed that the overwhelming majority (93.7%) of school principals in both district-operated schools and in charter schools possessed such a degree, and so the variable did not provide much independently useful information. A more specific set of items seemed necessary to characterize the different elements that might go into professional preparation, such as degree types, degree majors, specific schools or colleges, certifications, or other professional experiences.

The other variables could also be further disaggregated into more revealing components, since other personal beliefs and circumstances not included in this study may have contributed to the personal factor. Future investigations with a more detailed survey of personal factor variables may produce a clearer understanding of such variables contribute to self-efficacy beliefs of respondents.

Conclusions Regarding Environmental Factor Effect

Research Question 4 concerned the extent to which environmental factors of school governance and the socio-economic status of students affected principal self-efficacy beliefs regarding these federal and state accountability measures. Neither the environmental variable as a whole nor its component variables accounted for the variability in self-efficacy related to the *No Child Left Behind Act of 2001* or the *Florida School Grades Plan*. No significant contribution could be seen from any differences in most recent school grade, most recent AYP determination, school level, school type, or school Title I status.

The hypothesis related to this research question was that principals' self-efficacy belief in their ability to lead their faculties to produce learning gains would show a statistically significant contribution ($p < 0.05$) from environmental factor variables. However, given the lack of significance in the results, the null hypothesis could not be rejected.

This finding was especially interesting, since it suggested that the environmental factor was quite complex. The lack of observable significant environment factor effect in the current study seemed to be at least somewhat inconsistent with the findings of Smith et al. (2006) that higher self-efficacy was observed in principals in schools with more complex populations and in schools with higher proportions of students eligible for free and reduced-price lunch. It may have been that component variables as defined in the current study did not sufficiently differentiate the actual variation that exists in each school setting. It could also have been that school principals were less affected by

environmental variables in general, or less affected by these environmental variables in particular. Other possible environmental factors that may have affected principal self-efficacy beliefs include the expectation principals might have had about their mobility from school to school, the recent frequency of principal or staff turnover in the school, the relative degree of parental participation in the education program, or changes in federal and state law affecting the terms and penalties of each accountability plan.

Given the high level of belief in the attainability of the goals of the *Florida School Grades Plan*, it was also possible that the state plan was accepted to such a degree that there was only minimal variation across any environmental factor variable. Although widespread compliance was not precisely the same thing as widespread confidence in something so complex as a high-stakes school accountability plan, the current data clearly suggested that Florida school principals were positively focused on achieving on the goals of the *Florida School Grades Plan*. Further study may determine the more complex aspects of their compliance and confidence more conclusively.

Conversely, given the low level of belief in the attainability of the goals of *No Child Left Behind*, it was possible that the federal plan was rejected to such a degree that there was only minimal variation across any environmental factor variable. The current data indicated that principal self-efficacy belief was significantly lower for the federal plan than for the state plan, which may have indicated that principal leadership behavior in support of the federal plan was more associated with mere compliance rather than with confidence.

Finally, since both the federal and state plan required increased levels of student achievement, it was logical that principal leadership behaviors associated with one plan could also be reported as being associated with the other plan. Although it may not be possible for principals to precisely distinguish their own motivations and leadership behaviors between the two plans, the very large discrepancy in principal beliefs related to the federal and state plan suggested that much could be learned through more detailed study about principal efforts in achieving the goals of these plans.

In summary, schools and school districts were complex social entities, and it could easily be that there were less-obvious environmental variables of far greater consequences than those tested in this study. Future investigations with a more detailed survey of environmental factor variables may produce a clearer understanding of how such variables contribute to self-efficacy beliefs of principals.

Relationship of the Current Study to Prior Research

The concept of self-efficacy was first defined by Bandura (1977), and was subsequently researched extensively in many different types of social and vocational settings. Self-efficacy was a more nuanced set of beliefs than simple self-confidence, and Bandura (1997b) found that self-efficacy belief was associated with higher resilience, greater ability to sustain stress, and improved performance. Self-efficacy was distinguished from other perceptions about the self, such as self-concept, self-worth, and self-esteem, in two important aspects: (a) it was related to a specific skill or capacity, and

(b) it was not innately linked to other self-perceptions (Goddard, Hoy, & Woolfolk, 2004).

Bandura (1978) described a model of triadic reciprocity to explain the formation of self-efficacy beliefs in which personal factors, environmental factors, and goal-seeking behavior all interact with each other. It was this complex system of reciprocity that distinguished social cognitive theory from the classical behaviorist theory that preceded it. In social cognitive theory, the person whose behavior was being reinforced was aware of their own behavior, of expectations placed upon them, and of many other personal and environmental influences that may have shaped their own motivation and their own behavior. In social cognitive theory, each of these elements became a controllable variable, and the possibility thereby existed for consciously designing social systems in such a way as to encourage positive motivation and desirable behavior. For example, social cognitive theory was commonly applied in schools when students learned to define their own learning goals and to then engaged in learning behaviors toward those goals. The better the classroom environment was designed to reinforce that behavior by linking it to those goals, the more likely it was that student learning would actually occur.

Social cognitive theory had also been advanced to the point that it described how teacher self-efficacy beliefs were correlated with student achievement (Liem, Lau, & Nie, 2008; Pajares & Johnson, 1996; Pajares & Miller, 1994). Principal leadership behavior had also been demonstrated to play a significant role in collective teacher efficacy beliefs (Ross & Gray, 2006).

Despite such theoretical advances, principal self-efficacy belief remained an “elusive construct” in the view of Tschannen-Moran and Gareis (2004, p. 583), who developed the Principal Sense of Efficacy Scale (PSES) in order to better describe it. Compared to teacher self-efficacy, principal self-efficacy has been sparsely studied (Smith et al., 2006), who also developed their own instrument, the Principal Self-Efficacy Scale.

Rather than continue the validation of the Principal Sense of Efficacy Scale (Tschannen-Moran & Gareis, 2004) or the Principal Self Efficacy Scale (Smith, et al., 2006), which was important work that remained to be done, the current study proposed to provide a preliminary application of the basic principles of social cognitive theory to a specific set of principal self-efficacy beliefs. In this study, those self-efficacy beliefs under consideration were not the comprehensive span of school leadership behaviors encompassed in the PSES, but solely principal beliefs about the landmark federal and state accountability measures which changed so much about expectations for schools and principals.

This study investigated how social cognitive theory explain principal motivation related to these accountability measures, and how it accounted for variations in principal self-efficacy belief and in leadership behaviors related to the *No Child Left Behind Act of 2001* and the *Florida School Grades Plan*. This study was designed to add to the understanding of how personal and environmental variables might have affected principal self-efficacy beliefs in regard to principal beliefs about the attainability of federal and state goals.

Practice and Policy Implications of the Current Study

In the case of the *Florida School Grades Plan*, it appeared that a large majority of the Florida school principals in this study believed in the attainability of the plan goals, and that they tended to have a high level of belief in their leadership ability to achieve those goals. These beliefs were associated with a high level of purposeful leadership behavior in making changes in the curriculum and instruction in their schools, and in making staffing changes intended to help achieve the plan goals. Within these parameters, it could be concluded that the Florida school principals in this study generally accepted the validity of the goals of the *Florida School Grades Plan*, and that they were working to achieve those goals in their schools.

In general, the high level of principal self-efficacy belief related to the *Florida School Grades Plan* did not appear to be dependent on basic environmental factors. There seemed to be no significant difference in these beliefs among principals of Title I schools and non-Title I schools, between charter schools and district-operated schools, or between elementary and secondary schools. Notably, there seemed to be no significant difference in principal self-efficacy belief related to the school's most recent grade, suggesting that even principals of schools with currently-low grades were confident that they can lead their school to earning a grade of A under the state plan.

In terms of professional practice, this study suggests that some local support system for principals could be useful, especially if this support system included ongoing measures of principal self-efficacy belief related to federal and state accountability measures. Such a support system might use a guided mastery approach to help principals

use achievement data to predict the results of federal and state accountability plans, expand their understanding of what their own leadership responses to achievement gaps might include, and investigate the possible effects of their leadership decisions on student achievement.

Because the federal and state accountability plans are creations of law and public policy rather than of professional practice, this study also has policy implications. Within the limitations of this study, the *Florida School Grades Plan* seems to have been well-established in the minds of school principals as having attainable goals, and they generally reported that they were making school-based decisions in support of those goals. Legislators and Florida state education officials might therefore be cautious about making fundamental changes to the goals of the *Florida School Grades Plan*.

In contrast, principal self-efficacy belief in the goals of the *No Child Left Behind Act of 2001* was extremely low, and there was a significantly lower level of principal self-efficacy belief related to the federal plan. It was notable, however, that the minority of principals who did believe in the attainability of the federal plan goals showed slightly higher levels of purposeful leadership action toward the federal plan goals.

Within these parameters, it could be inferred that Florida school principals generally rejected the validity of the goals of the *No Child Left Behind Act of 2001*, but that they were working to achieve those goals in their schools. This finding should be understood with the understanding that principal leadership actions may have been directed at both the federal and state accountability plan goals in those circumstances where this might have been possible. There seemed to be no significant difference in

principal self-efficacy beliefs among principals of Title I schools and non-Title I schools, between charter schools and district-operated schools, or between elementary and secondary schools. There seemed to be no significant difference in principal self-efficacy belief related to the school's most recent AYP determination, suggesting that even principals of schools currently making AYP have no greater self-efficacy beliefs than principals of schools failing to make AYP.

Within the limitations of this study, it seemed clear the Florida principals had little regard for the validity of the 100% proficiency goal of the *No Child Left Behind Act of 2001*. The low level of belief in the attainability of this goal was nearly the complete inverse of the comparable belief for the *Florida School Grades Plan*. This low level of belief in goal attainability was associated with a lower level of principal self-efficacy.

Although a minority of principals who did believe in the attainability of this goal also indicated a slightly higher level of leadership action in support it, the overall low level of self-efficacy belief suggested that the U.S. Congress, the President, and the U.S. Secretary of Education should consider fundamental changes to the goals of the *No Child Left Behind Act of 2001*. These changes should include (1) elimination of the statistically-extraordinary goal of 100% proficiency, (2) elimination or adjustment of the federal plan's 2014 deadline, and a (3) change to a growth model such as was used in the *Florida School Grades Plan*. If the wide discrepancy between principal beliefs regarding the federal and state plans in this Florida study were found to be similar in other states, another possible course of action would be to return to the pre-NCLB approach of

regarding educational goal-setting and accountability measures as the responsibility of each state, rather than of the federal government.

Recommendations for Future Research

This study provided evidence that there was a significant discrepancy between principal belief in the attainability of the goals of the federal the *No Child Left Behind Act of 2001* and the *Florida School Grades Plan*, with a concomitant discrepancy in principal self-efficacy belief. These significant findings were consistent with the predictions of social cognitive theory. It would be helpful to know if similar discrepancies were found to exist in a larger study that included a larger sample of Florida principals. It would also be interesting to learn if such discrepancies also exist for principals in other states with different state accountability plans, so replication of this study in other states seems like a logical extension of the current work.

Other findings of the current study, however, raised other questions. The personal factor variables appeared to account for a small amount of variance in such belief, and environmental factors could not be shown to account for any portion of the variance. Even though many school districts tended to favor hiring principals with considerable experience in education, this practice appeared to show no observable benefit in terms of heightened self-efficacy belief, or in higher incidence of leadership behavior toward goal attainment. These findings seem to be inconsistent with the predictions of social cognitive theory, and therefore further study was indicated.

A more detailed investigation into the nuances of principal self-efficacy could be accomplished in part by a larger study of Florida school principals using the more-comprehensive Principal Self-Efficacy Scale as developed by Tschannen-Moran and Gareis (2004). However, future research should also include a more comprehensive investigation into a more discriminating set of personal factor variables and environmental factor variables than were included in the current study.

As Table 9 showed, this study did not include any responses from principals with less than 10 year's experience in education, and about half of the responses were from principals with more than 20 year's experience. It may be helpful to make an effort to include less-experienced principals in future studies to see if this variable has an effect on self-efficacy beliefs related to accountability plans.

A more specific set of survey items seems necessary to characterize the different elements that might go into professional preparation, such as degree types, degree majors, specific schools or colleges, certifications (including revised principal certification types and standards), or other professional experiences. A key research question of future research should also address the possibility that principal beliefs regarding these accountability measures approach such a degree of universality that they transcend any significant effect from personal and environmental factor variables.

Further study would also be useful in determining if there are other contrary outcomes related to federal and state accountability plans. One of the notable distinctions between the Florida accountability plan and the federal accountability is that the state plan has no predetermined deadline, but only measures growth from year to year. The

federal plan, in contrast, has a definite deadline for 100% proficiency. Each plan provides annual results, and these annual results may have an effect on self-efficacy beliefs and on related leadership behaviors over time. It may be, for example, that repeatedly failing to reach a federal or state accountability goal becomes a demotivator for continued effort, and that such an effect may even increase over time.

Finally, as the interplay of behavioral, personal, and environment factors become more well understood in relation to federal and state accountability measures, additional research will be needed in articulating practical responses to improving principal self-efficacy beliefs. In particular, Bandura (2000b) identified guided mastery as one of the most effective ways of improving specific competencies. If the subskills of principal leadership that most directly affect teacher behavior and student achievement can be identified, principal preparation and professional development programs could use guided mastery approaches to improve principal self-efficacy belief.

Summary

Two of the most fundamental recent changes in schooling were also widespread in American public life: (a) a move to privatization of public services and (b) a strong demand for accountability for results from public agencies. The trend of privatization appeared in education as public charter schools, vouchers, and home schooling. The trend of accountability appeared in education most conspicuously as the student achievement goals established in the *No Child Left Behind Act of 2001*, which was described as the

most sweeping reform of federal education law in nearly 40 years (U.S. Department of Education, n.d.)

This federal accountability system was implemented in Florida without eliminating the previous state accountability system, known as the *Florida A+ Accountability Plan*, the first version of which was implemented in 1999 and which was revised in 2006. The *Florida A+ Accountability Plan* (2006) included several new accountability provisions, including the *Florida School Grades Plan* in which schools received letter grades based largely on gain scores on the state achievement test, known as the Florida Comprehensive Assessment Test, or FCAT. Since the state plan measured gains, but the federal plan measured actual achievement levels, it was common in Florida to find schools that received grades of A or B on the *Florida A+ Accountability Plan*, but failed to make adequate yearly progress under the *No Child Left Behind Act of 2001*. Principals of these schools were left with the difficult task of explaining to their parents that their top-graded school was not making adequate progress toward federal education educational goals.

One of the most notable features of *No Child Left Behind* was its unprecedented goal that all students in all schools will achieve 100% on state-by-state grade level examinations in reading and mathematics by the year 2014. A fundamental problem with this system was the statistical reality that any measure of natural factors such as academic ability and student achievement would fall more or less on a normal distribution curve; and that it was, at best, “extraordinarily ambitious” (Linn, Baker, & Betebenner, 2002, p.12) or, more pointedly, “completely unrealistic” (Linn, 2005, p. 15) to actually expect

that all students in all states could and would master all standards in reading, writing, and mathematics by a certain date. This 100% proficiency expectation in the federal plan was never included in the state plan, which instead awarded letter grades for gains in student achievement rather than for absolute levels of achievement.

This study showed that Florida school principals had sharply different beliefs about the attainability of these accountability plan goals. The overwhelming majority of Florida school principals surveyed believed the state goals to be attainable in their own school, whereas only a small minority of principals believed the federal goal could be attained. This disparity was associated with a concomitant and significant difference in self-efficacy beliefs related to these accountability plans, and in the associated leadership behavior of principals. These beliefs were so pronounced that personal factors and environmental factors had little if any observable effect on the variance in principal belief. However, this finding warranted further study to determine if more precisely-defined personal and environmental variables can be found to play a role in shaping principal self-efficacy beliefs.

Within the limits of this study, these significant differences suggested that policymakers should be cautious about modifying the *Florida School Grades Plan*, since principal self-efficacy belief related to the plan was already quite high. In contrast, the findings of this study suggest that policymakers should instead look to revising the goals of the *No Child Left Behind Act of 2001* to correct the dearth of principal belief in the actual attainability of its goals.

APPENDIX A
PRINCIPAL SELF-EFFICACY SURVEY

Beliefs of School Principals Regarding Federal And State Accountability Plans

Welcome, and thank you for your interest!

You have been invited to participate in a survey about principal beliefs regarding school accountability under the federal *No Child Left Behind Act*, and under the *Florida School Grades Plan*.

WHY YOU ARE BEING INVITED TO PARTICIPATE

You are being invited to participate because you are currently the principal or head of a public school or public charter school in Florida, and because principal beliefs about school accountability in Florida are the central focus of this research. In this study, approximately 300 Florida principals have been asked to complete a questionnaire that takes about 10 minutes to complete.

YOUR PARTICIPATION IS VOLUNTARY

Your participation is important, but completely voluntary. Your school district has reviewed this study and approved it for your consideration. You are not required by your employer to participate in this study. You should take part in this study only because you want to. There is no penalty for not taking part, and you will not lose any benefits if you choose not to participate. You may quit the survey at any time, and may choose to skip any question you do not wish to answer. You can also contact the researcher to ask any questions.

If you do choose to participate, your responses will be very valuable to understanding how principals see important federal and state education policies.

All you will be asked to do in this study is to complete a brief online survey. No other participation on your part is requested.

PURPOSE OF THIS STUDY

This study is titled "Self-efficacy beliefs of Florida school principals regarding federal and state accountability measures." This questionnaire is designed to examine your beliefs as a school principal about two different accountability systems: the *No Child Left Behind Act* (in which schools are identified as making or not making adequate yearly progress) and the *Florida School Grades Plan* (in which schools are assigned annual letter grades based on student performance).

WHO IS CONDUCTING THIS SURVEY

This research is being conducted by J.F. "Jeff" McCullers, a doctoral candidate in the College of Education at the University of Central Florida in Orlando. Mr. McCullers may be reached at JeffFM@leeschools.net or (239) 337 8115. Mr. McCullers is employed by the School District of

Lee County, Florida as its Director of Grants & Program Development, but this research is his own and is not sponsored by his employer.

Because the researcher is a graduate student, he is being guided by William C. Bozeman, Ph.D., a UCF faculty supervisor in the College of Education. Dr. Bozeman may be reached at bozeman@mail.ucf.edu or at (407) 823 1471.

Research at the University of Central Florida is conducted under the oversight of the UCF Institutional Review Board.

Questions or concerns about research participants' rights may be directed to the UCF IRB office, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246. The telephone number is (407) 823 2901.

RISKS

There are no expected risks for taking part in this study. You do not have to answer every question or complete every task. You will not lose any benefits if you skip questions or tasks. You do not have to answer any questions that make you feel uncomfortable.

BENEFITS

There are no expected benefits to you for taking part in this study, apart from learning more about the research process or having an opportunity to share your opinions about school accountability measures. There is no compensation or other payment to you for taking part in this study

HOW YOUR PRIVACY WILL BE PROTECTED

It is the intent of the researcher that your participation and your responses be anonymous. This means that no one, not even members of the research team, will know that the information you give came from you. The researcher will make no attempt to personally identify respondents, and will take the following precautions when handling data you provide: (1) Other than Internet Protocol (IP) addresses, no unique personal identifiers (such as respondent names, e-mail addresses, postal addresses, telephone numbers, or school names) will be collected at any time. (2) All computers and computer files used by the researcher during the course of the survey will be password-protected using unique passwords known only the researcher, and shared with no other person. (3) Computer files will be stripped of any identifying information not necessary to survey analysis as soon as is practicable during the course of the study. This includes Internet Protocol (IP) addresses, which will be archived separately. (4) The dissertation report from this study will report data in aggregate form, and will not report responses from individual respondents, from specific schools, or from specific school districts. (5) The researcher will secure all known copies of raw survey data, which will be archived for three years. (6) The researcher will provide an electronic copy of the final dissertation report to the school districts who approved the research, but will not provide to them any raw data or any disaggregated reports. The final dissertation report will also be available through customary means, such as through the University of Central Florida library, but no raw data or disaggregated reports will be available.

This survey is conducted through the paid services of QuestionPro, a commercial provider of online surveys and a certified licensee of the TRUSTe Privacy Seal Program. The privacy policy of

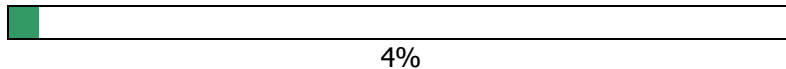
this vendor affirms that data collected through surveys is owned solely by the survey administrator and that the vendor will never use any of the data collected. The researcher will delete all related survey information, including all survey responses, at the conclusion of the study. The vendor's data retention policy affirms that all archived copies of this data will be deleted within seven days after being deleted by the researcher.

Despite these efforts, transfer of information across the Internet is not secure and could be observed by a third party. To varying degrees, this is fundamental aspect of all Internet activity and communications. If you choose to respond to this survey on a computer and/or network owned or accessible by a third party, such as your employer, then such persons may be able to view your responses. You may be able to increase your privacy protection by using a limited access computer and by closing your browser window after completing the survey.

HOW TO PARTICIPATE

If you wish to participate in the study and you confirm that you are 18 years of age or older, you may begin by clicking on the CONTINUE button below. By clicking on the CONTINUE button below, you are affirming that are at least 18 years of age and that you give your voluntary consent to participate in this study.

Continue



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« Back

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Beliefs of School Principals Regarding Federal And State Accountability Plans

DIRECTIONS

Some questions are general in nature, but some refer to a specific federal or state accountability measure. Such questions will include a graphic as shown below to make the subject of each question clear.



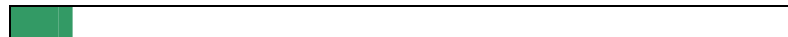
PROGRESS

There are 19 questions in this survey. As you proceed, a green progress bar will be shown at the bottom of each page showing how much of the survey has been completed.

START THE SURVEY

To begin the survey, click on the CONTINUE button below.

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« Back

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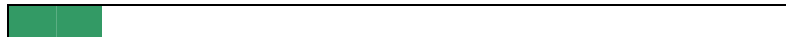
Beliefs of School Principals Regarding Federal And State Accountability Plans



1. How much effect do you believe your leadership as principal can help raise student achievement so that 100% of your students meet the proficiency requirements of the *No Child Left Behind Act* by the year 2014?

- ☐ None at all
- ☐ A little
- ☐ Some
- ☐ Quite a bit
- ☐ A great deal

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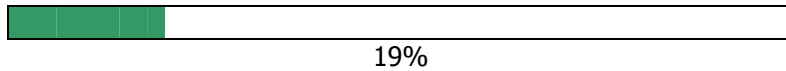
Beliefs of School Principals Regarding Federal And State Accountability Plans



2. How much effect do you believe your leadership as principal can help raise student achievement so that your school can earn a grade of "A" under the *Florida School Grades Plan*?

- ☐ None at all
- ☐ A little
- ☐ Some
- ☐ Quite a bit
- ☐ A great deal

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« Back

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Beliefs of School Principals Regarding Federal And State Accountability Plans



3. A major goal of the *No Child Left Behind Act* is for all students in all subgroups to demonstrate proficiency in all state standards in mathematics and reading within 12 years of the law's enactment.

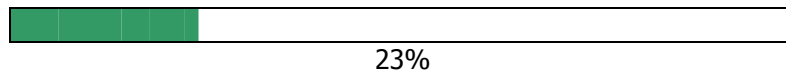
The subgroups include African American students, American Indian students, Asian students, Hispanic students, white students, economically disadvantaged students, limited English proficiency students, and students with disabilities.

In Florida, the goal is for 100% of students in each subgroup to attain a Level 3 or higher in FCAT mathematics and FCAT reading by the year 2014.

Do you believe this goal can be fully achieved in your school?

- ☐ Yes
☐ No

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[« Back](#)

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Beliefs of School Principals Regarding Federal And State Accountability Plans



4. A major goal of the *Florida School Grades Plan* is for all students to show grade-level proficiency or learning gains in FCAT mathematics, reading, and science.

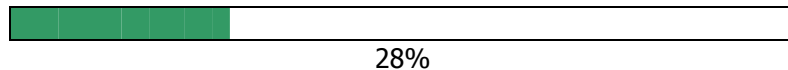
School grades are calculated by using FCAT results to determine the annual learning gains of each student, assess proficiency standards, and review the progress of the lowest quartile of students.

In Florida, the goal is for each school to earn a grade of "A."

Do you believe this goal can be fully achieved in your school?

- ☐ Yes
☐ No

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« Back

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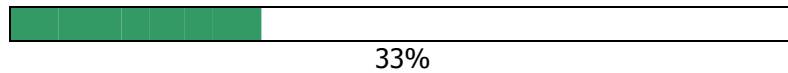
Beliefs of School Principals Regarding Federal And State Accountability Plans



5. In your role as principal, to what extent have you made changes in your school's curriculum or instructional practices in order to meet the goals of the *No Child Left Behind Act*?

- ☐ None at all
- ☐ A little
- ☐ Some
- ☐ Quite a bit
- ☐ A great deal

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« Back

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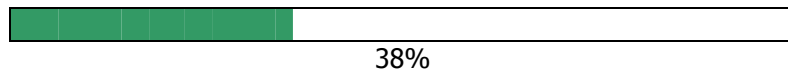
Beliefs of School Principals Regarding Federal And State Accountability Plans



6. In your role as principal, to what extent have you made changes in your school's curriculum or instructional practices in order to meet the goals of the *Florida School Grades Plan*?

- ☐ None at all
- ☐ A little
- ☐ Some
- ☐ Quite a bit
- ☐ A great deal

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« Back

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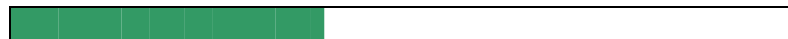
Beliefs of School Principals Regarding Federal And State Accountability Plans



7. In your role as principal, to what extent have you made changes in your school's instructional staffing in order to meet the goals of the *No Child Left Behind Act*?

- ☐ None at all
- ☐ A little
- ☐ Some
- ☐ Quite a bit
- ☐ A great deal

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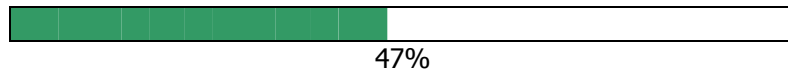
Beliefs of School Principals Regarding Federal And State Accountability Plans



8. In your role as principal, to what extent have you made changes in your school's instructional staffing in order to meet the goals of the *Florida School Grades Plan*?

- ☐ None at all
- ☐ A little
- ☐ Some
- ☐ Quite a bit
- ☐ A great deal

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« Back

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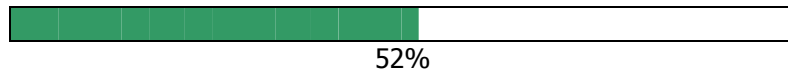
Beliefs of School Principals Regarding Federal And State Accountability Plans



9. To what extent do you believe you will be held personally accountable for your progress (or lack of progress) in meeting the goals of the *No Child Left Behind Act*?

- ☐ None at all
- ☐ A little
- ☐ Some
- ☐ Quite a bit
- ☐ A great deal

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« Back

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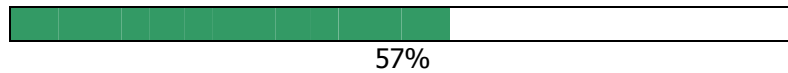
Beliefs of School Principals Regarding Federal And State Accountability Plans



10. To what extent do you believe you will be held personally accountable for your progress (or lack of progress) in meeting the goals of the *Florida School Grades Plan*?

- ☐ None at all
- ☐ A little
- ☐ Some
- ☐ Quite a bit
- ☐ A great deal

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« Back

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Beliefs of School Principals Regarding Federal And State Accountability Plans



11. In your opinion, how likely is it that the goals of the *No Child Left Behind Act* will remain in effect through the year 2014?

- ☐ None at all
- ☐ A little
- ☐ Some
- ☐ Quite a bit
- ☐ A great deal

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« Back

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Beliefs of School Principals Regarding Federal And State Accountability Plans



12. In your opinion, how likely is it that the *Florida School Grades Plan* will continue to be used to evaluate your school?

- ☐ None at all
- ☐ A little
- ☐ Some
- ☐ Quite a bit
- ☐ A great deal

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« Back

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Beliefs of School Principals Regarding Federal And State Accountability Plans

13. Do you hold any degree conferred by a school or college of education?

- ☐ Yes
- ☐ No

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« Back

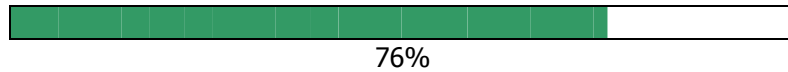
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Beliefs of School Principals Regarding Federal And State Accountability Plans

14. How many total years of work experience do you have in PK-12 education? (Include all years in any position in any public, charter, or private school.)

- ☐ 0-9
- ☐ 10-19
- ☐ 20-29
- ☐ 30 or more

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« Back

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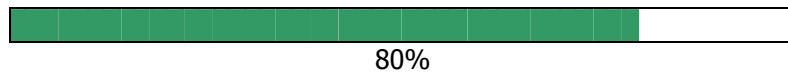
Beliefs of School Principals Regarding Federal And State Accountability Plans

15. What grade did your school earn last year under the *Florida School Grades Plan*?

If your school did not receive a grade, then select "NA."

- ☐ F
- ☐ D
- ☐ C
- ☐ B
- ☐ A
- ☐ NA

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« Back

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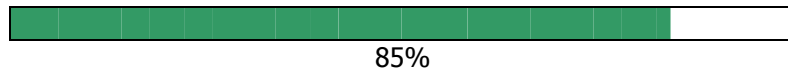
Beliefs of School Principals Regarding Federal And State Accountability Plans

16. Did your school make adequate yearly progress (AYP) last year under the *No Child Left Behind Act*?

If your school did not receive an AYP determination, then select "NA."

- ☐ Yes
- ☐ No
- ☐ NA

Continue



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« Back

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Beliefs of School Principals Regarding Federal And State Accountability Plans

17. Did your school receive Title I grant funds last year (either schoolwide or targeted)?

- ☐ Yes
- ☐ No

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« Back

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Beliefs of School Principals Regarding Federal And State Accountability Plans

18. What type of school do you lead?

- ☐ District school
- ☐ Charter school

Continue



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« Back

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Beliefs of School Principals Regarding Federal And State Accountability Plans

19. What grade levels are served by your school?

- ☐ Elementary school (at least one grade in PK-5)
- ☐ Middle/junior high school (at least one grade in 6-8)
- ☐ Senior high school (at least one grade in 9-12)
- ☐ Combination school (with grade levels in multiple categories)
- ☐ Adult school

[Click Here To Finish Survey](#)



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THANK YOU!

Your response has been saved and recorded anonymously with ID **0000000**.

Thank you so very much for your help. I value your feedback and appreciate you taking the time to fill out the survey.

If you have further questions or comments, or if you would like to see the final results of the study, please feel free to contact me at:

J.F. "Jeff" McCullers
JeffFM@leeschools.net
(239) 337 8115
<http://grants.leeschools.net>

To ensure your privacy, please close your browser window.

Thank You for completing this survey.

Create Your Own Online Survey!



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APPENDIX B
PRINCIPAL SELF-EFFICACY SURVEY RESULTS

1.	How much effect do you believe your leadership as principal can help raise student achievement so that 100% of your students meet the proficiency requirements of the <i>No Child Left Behind Act</i> by the year 2014?	<i>n</i>	%
	None at all	7	6.25%
	A little	4	3.57%
	Some	15	13.39%
	Quite a bit	41	36.61%
	A great deal	45	40.18%
	Total	112	

2.	How much effect do you believe your leadership as principal can help raise student achievement so that your school can earn a grade of “A” under the <i>Florida School Grades Plan</i> ?	<i>n</i>	%
	None at all	1	0.90%
	A little	1	0.90%
	Some	13	11.71%
	Quite a bit	33	29.73%
	A great deal	63	56.76%
	Total	111	

3.	A major goal of the <i>No Child Left Behind Act</i> is for all students in all subgroups to demonstrate proficiency in all state standards in mathematics and reading within 12 years of the laws enactment. The subgroups include African American students, American Indian students, Asian students, Hispanic students, white students, economically disadvantaged students, limited English proficiency students, and students with disabilities. In Florida, the goal is for 100% of students in each subgroup to attain a Level 3 or higher in FCAT mathematics and FCAT reading by the year 2014. Do you believe this goal can be fully achieved in your school?	<i>n</i>	<i>%</i>
	Yes	23	20.72%
	No	88	79.28%
	Total	111	
4.	A major goal of the <i>Florida School Grades Plan</i> is for all students to show grade-level proficiency or learning gains in FCAT mathematics, reading, and science. School grades are calculated by using FCAT results to determine the annual learning gains of each student, assess proficiency standards, and review the progress of the lowest quartile of students. In Florida, the goal is for each school to earn a grade of A. Do you believe this goal can be fully achieved in your school?	<i>n</i>	<i>%</i>
	Yes	93	83.78%
	No	18	16.22%
	Total	111	

5.	In your role as principal, to what extent have you made changes in your school's curriculum or instructional practices in order to meet the goals of the <i>No Child Left Behind</i> Act?	<i>n</i>	%
	None at all	2	1.79%
	A little	3	2.68%
	Some	13	11.61%
	Quite a bit	54	48.21%
	A great deal	40	35.71%
	Total	112	
6.	In your role as principal, to what extent have you made changes in your school's curriculum or instructional practices in order to meet the goals of the <i>Florida School Grades Plan</i> ?	<i>n</i>	%
	None at all	1	0.90%
	A little	3	2.70%
	Some	14	12.61%
	Quite a bit	48	43.24%
	A great deal	45	40.54%
	Total	111	
7.	In your role as principal, to what extent have you made changes in your school's instructional staffing in order to meet the goals of the <i>No Child Left Behind</i> Act?	<i>n</i>	%
	None at all	5	4.46%
	A little	6	5.36%
	Some	31	27.68%
	Quite a bit	44	39.29%
	A great deal	26	23.21%
	Total	112	

8.	In your role as principal, to what extent have you made changes in your school's instructional staffing in order to meet the goals of the <i>Florida School Grades Plan</i> ?	<i>n</i>	%
	None at all	4	3.60%
	A little	9	8.11%
	Some	29	26.13%
	Quite a bit	46	41.44%
	A great deal	23	20.72%
	Total	111	
9.	To what extent do you believe you will be held personally accountable for your progress (or lack of progress) in meeting the goals of the <i>No Child Left Behind Act</i> ?	<i>n</i>	%
	None at all	1	0.90%
	A little	3	2.70%
	Some	12	10.81%
	Quite a bit	31	27.93%
	A great deal	64	57.66%
	Total	111	
10.	To what extent do you believe you will be held personally accountable for your progress (or lack of progress) in meeting the goals of the <i>Florida School Grades Plan</i> ?	<i>n</i>	%
	None at all	0	0.00%
	A little	0	0.00%
	Some	13	11.71%
	Quite a bit	27	24.32%
	A great deal	71	63.96%
	Total	111	

11.	In your opinion, how likely is it that the goals of the <i>No Child Left Behind</i> Act will remain in effect through the year 2014?	<i>n</i>	%
	Very unlikely	10	9.01%
	Somewhat unlikely	21	18.92%
	Neither likely nor unlikely	13	11.71%
	Somewhat likely	36	32.43%
	Very likely	31	27.93%
	Total	111	
12.	In your opinion, how likely is it that the <i>Florida School Grades Plan</i> will continue to be used to evaluate your school?	<i>n</i>	%
	Very unlikely	0	0.00%
	Somewhat unlikely	7	6.31%
	Neither likely nor unlikely	6	5.41%
	Somewhat likely	36	32.43%
	Very likely	62	55.86%
	Total	111	
13.	Do you hold any degree conferred by a school or college of education?	<i>n</i>	%
	Yes	109	97.32%
	No	3	2.68%
	Total	112	

14.	How many total years of work experience do you have in PK-12 education? (Include all years in any position in any public, charter, or private school.)	<i>n</i>	%
	0-9	0	0.00%
	10-19	28	25.00%
	20-29	31	27.68%
	30 or more	53	47.32%
	Total	112	
15.	What grade did your school earn last year under the <i>Florida School Grades Plan</i> ? If your school did not receive a grade, then select NA.	<i>n</i>	%
	F	0	0.00%
	D	1	0.89%
	C	16	14.29%
	B	21	18.75%
	A	65	58.04%
	NA	9	8.04%
	Total	112	
16.	Did your school make adequate yearly progress (AYP) last year under the <i>No Child Left Behind Act</i> ? If your school did not receive an AYP determination, then select NA.	<i>n</i>	%
	Yes	36	32.14%
	No	70	62.50%
	NA	6	5.36%
	Total	112	

17.	Did your school receive Title I grant funds last year (either schoolwide or targeted)?	<i>n</i>	%
	Yes	43	38.39%
	No	69	61.61%
	Total	112	
18.	What type of school do you lead?	<i>n</i>	%
	District school	98	87.50%
	Charter school	14	12.50%
	Total	112	
19.	What grade levels are served by your school?	<i>n</i>	%
	Elementary school (at least one grade in PK-5)	64	57.14%
	Middle/junior high school (at least one grade in 6-8)	22	19.64%
	Senior high school (at least one grade in 9-12)	13	11.61%
	Combination school (grade levels in multiple categories)	12	10.71%
	Adult school	1	0.89%
	Total	112	

APPENDIX C
RESEARCH APPROVAL (BREVARD)

School Board of Brevard County
2700 Judge Fran Jamieson Way Viera, FL 32940-6699
Richard A. DiPatri Ed.D, Superintendent



March 19, 2009

Dear Mr McCullers,

Thank you for your application to conduct research in the Brevard Public Schools. This letter is official verification that your application has been accepted and approved through the Office of Accountability, Testing, & Evaluation. However, approval from this office does not obligate the principal of the schools you have selected to participate in the proposed research. Please contact the principals of the impacted schools in order to obtain their approval. Upon the completion of your research, submit your findings to our office. If we can be of further assistance, do not hesitate to contact our office.

Sincerely,

Sylvia Mijuskovic

Sylvia Mijuskovic, Resource Teacher
Office of Accountability, Testing, and Evaluation

Office of Accountability, Testing & Evaluation
Phone: (321) 633-1000 FAX: (321) 633-3465

APPENDIX D
RESEARCH APPROVAL (LEE)

McCullers, Jeff

From: Itzen, Richard
Sent: Friday, April 24, 2009 3:27 PM
To: McCullers, Jeff
Subject: RE: Research Study Approval

Jeff,

The School District of Lee County is aware that the "copy of results" that we are requesting will be for the aggregated data displayed in your final dissertation. We are not expecting results disaggregated by county or individual respondent.

Thanks.

Richard Itzen, Director
Dept. of Accountability, Research, and Continuous Improvement
(239) 335-1448

From: McCullers, Jeff
Sent: Friday, April 24, 2009 12:51 PM
To: Itzen, Richard
Subject: RE: Research Study Approval
Importance: High

Dear Richard,

The UCF IRB has asked for the following clarification regarding Lee County's approval of my research:

Please make sure the County (Lee County) requesting a copy of the results realizes the results will be in group format and individual identifiers will not be released. If this is not the case you need to make sure the protocol /consent makes the participant aware of what will be shared and that it may be more than group format.

Can you confirm that Lee County's request for a "copy of results" (#3 below) is a request for the final dissertation report only, which will provide results in a group format (including all respondents in all districts) and not in disaggregate format (with separate results for Lee County or for individual respondents)?

Thank you very much for your assistance.

Kind regards,
Jeff

From: Itzen, Richard
Sent: Tuesday, March 10, 2009 3:28 PM
To: McCullers, Jeff
Subject: Research Study Approval
Importance: High

Jeff,

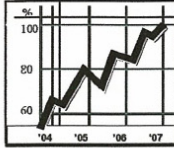
Our District Research Committee has reviewed your proposed study "Self-efficacy beliefs of Florida school principals regarding federal and state accountability" and approved it for immediate implementation in Lee County with the following expectations:

- 1) The District will cooperate fully with notification and distribution of the survey to principals.
- 2) Participation in the survey is voluntary on the part of principals.
- 3) The Dept. of Accountability, Research, and Continuous Improvement will receive a copy (electronic) of results when the study is completed.

Thank you for your interest in conducting research in the School District. Please let me know if there is anything further we can help with.

Richard Itzen, Director
[Dept. of Accountability, Research, and Continuous Improvement](#)
[\(239\) 335-1448](#)

APPENDIX E
RESEARCH APPROVAL (POLK)



ASSESSMENT, ACCOUNTABILITY AND EVALUATION

SCHOOL BOARD OF POLK COUNTY

1915 SOUTH FLORAL AVENUE
BARTOW, FLORIDA 33830
PHONE (863) 534-0688
FAX (863) 534-0770



Wilma Ferrer

Senior Director
(863) 534-0691
51491

Donna Buckner

Assessment
Senior Coordinator
(863) 534-0690
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Rob Campbell

Testing & Data Analysis
Senior Coordinator
(863) 647-4281
67943

Ted Dwyer

Research & Evaluation
Senior Coordinator
(863) 534-0736
51534

Gary Loar

Accountability
Senior Coordinator
(863) 534-0717
51515

Eileen Schofield

Administrative
Secretary
(863) 534-0688
51488

"The Mission of Polk County Public Schools is to ensure rigorous, relevant learning experiences for our students that result in high achievement."

April 7, 2009

J.F. "Jeff" McCullers
9962 Country Oaks Drive
Fort Myers FL 33967

Topic: Self-efficacy beliefs of Florida school principals regarding federal and state accountability measures

The Polk County Public Schools Research Review Board has **approved** your "Self-efficacy beliefs of Florida school principals regarding federal and state accountability measures" research proposal. Approval is contingent on:

- Continued IRB approval from your university
- You are required to notify and gain approval of any major changes to your research methods. (any changes that you would have to receive approval from your IRB must also be submitted to the district for approval)

A copy of your final research report must be submitted to my office upon completion.

If you have any questions, or if I can be of any further assistance, please contact me at the phone number or email address below.

Thanks,


Theodore Dwyer,
Chair, Research Review Board
(863) 534-0736 (51534)

Fax: (863) 534-0770

theodore.dwyer@polk-fl.net

APPENDIX F
HUMAN SUBJECTS RESEARCH APPROVAL (UCF IRB)



University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901, 407-882-2012 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Notice of Expedited Initial Review and Approval

From : UCF Institutional Review Board
FWA00000351, Exp. 10/8/11, IRB00001138

To : John F. McCullers

Date : April 28, 2009

IRB Number: SBE-09-06223

Study Title: Self-efficacy beliefs of Florida school principals regarding federal and state accountability measures

Dear Researcher:

Your research protocol noted above was approved by **expedited** review by the UCF IRB Vice-chair on 4/27/2009. **The expiration date is 4/26/2010.** Your study was determined to be minimal risk for human subjects and expeditable per federal regulations, 45 CFR 46.110. The category for which this study qualifies as expeditable research is as follows:

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

The IRB has approved a **waiver of documentation of consent** for all subjects. Participants do not have to sign a consent form, but the IRB requires that you give participants a copy of the IRB-approved consent form, letter, information sheet. For online surveys, please advise participants to print out the consent document for their files.

All data, which may include signed consent form documents, must be retained in a locked file cabinet for a minimum of three years (six if HIPAA applies) past the completion of this research. Any links to the identification of participants should be maintained on a password-protected computer if electronic information is used. Additional requirements may be imposed by your funding agency, your department, or other entities. Access to data is limited to authorized individuals listed as key study personnel.

To continue this research beyond the expiration date, a Continuing Review Form must be submitted 2 – 4 weeks prior to the expiration date. Advise the IRB if you receive a subpoena for the release of this information, or if a breach of confidentiality occurs. Also report any unanticipated problems or serious adverse events (within 5 working days). Do not make changes to the protocol methodology or consent form before obtaining IRB approval. Changes can be submitted for IRB review using the Addendum/Modification Request Form. An Addendum/Modification Request Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at <http://iris.research.ucf.edu>.

Failure to provide a continuing review report could lead to study suspension, a loss of funding and/or publication possibilities, or reporting of noncompliance to sponsors or funding agencies. The IRB maintains the authority under 45 CFR 46.110(e) to observe or have a third party observe the consent process and the research.

On behalf of Tracy Dietz, Ph.D., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 04/28/2009 10:17:52 AM EDT

IRB Coordinator

APPENDIX G
PERMISSION TO USE COPYRIGHTED MATERIAL (APA)



AMERICAN
PSYCHOLOGICAL
ASSOCIATION

Title: The self system in reciprocal
determinism.
Author: Bandura, Albert
Publication: American Psychologist
Publisher: American Psychological
Association
Date: Apr 1, 1978
Copyright © 1978, American Psychological Association

Logged in as:
John McCullers

LOGOUT

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